

American Planning Association

Making Great Communities Happen

LOCAL AND REGIONAL PERSPECTIVES ON THE MEGAREGIONAL CONCEPT IN LONG-RANGE PLANNING

TASK 2 – Case Studies of the Puget Sound and North Central Texas Regions

The literature review and scan of local and regional long-range plans, summarized in the Task 1 Interim Report, found that relatively few local and regional plans from within defined megaregions discuss the megaregional concept or include goals or policy statements related to megaregional issues. As a result, the project team undertook case study research to provide a more in-depth look at how regional planning agencies and local governments in two megaregions—Cascadia and the Texas Triangle—are (or are not) addressing megaregional issues in their long-range planning documents and what factors affect how these entities approach the megaregional concept in their plans.

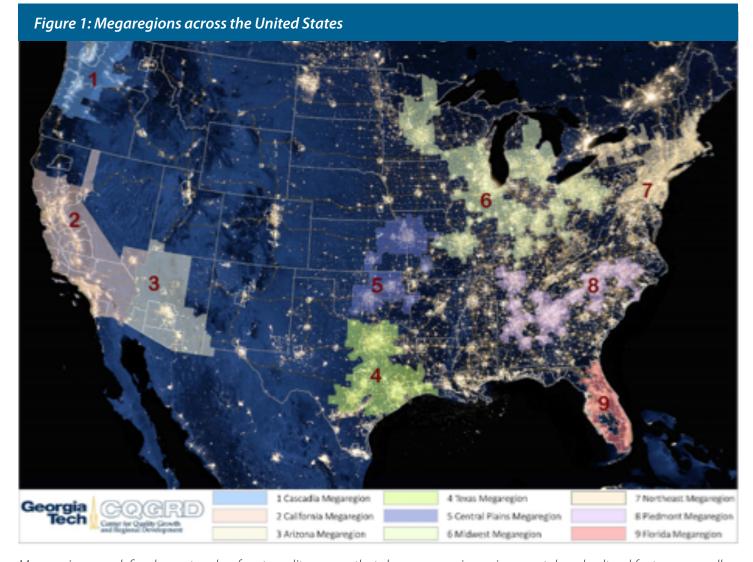
The case studies in this report focus on the Puget Sound Regional Council and the cities of Seattle, Tacoma, and Port Orchard, Washington within the Cascadia megaregion; and the North Central Texas Council of Governments, and the cities of Dallas, Fort Worth, and Sanger within the Texas Triangle megaregion. Each study looks at the megaregional planning experience of the subject governmental entities, the extent to which megaregional or interregional issues are addressed in these entities' long-range plans, and the factors perceived as limiting the incorporation of megaregional issues in these plans.

Methodology and Data Sources

To get a more detailed picture of how megaregional issues and initiatives are intersecting with regional and local long-range plans and planning activities, the project team used a collective case study approach to analyze the experiences of multiple governmental entities within two MPO jurisdictions (i.e., case study regions). First, the project team convened the project steering committee to solicit recommendations for potential case study regions. Based on this discussion, the project team selected the jurisdictions of the Puget Sound Regional Council (PSRC) in Washington (Cascadia Megaregion) and the North Central Texas Council of Governments (NCTCOG) (Texas Triangle Megaregion) for collective case studies.

Next, the project team identified four entities within each MPO jurisdiction for case study research: (1) the MPO; (2) the most populous city; (3) the second most populous city; and (4) one city located entirely within a county that does not include either of the two most populous cities (i.e., a peripheral city within the MPO's jurisdiction). Since these MPO jurisdictions collectively contain 130 peripheral cities, the project team developed a non-scientific online survey instrument, intended primarily to help select one peripheral city within each jurisdiction for follow-up research. This instrument included questions aimed at gauging the level of awareness of the concept of megaregions among respondents and the relative effects of several specific interregional or megaregional issues on planning processes within each respondent's jurisdiction (see Appendix A).

Then, the project team emailed an invitation to complete the online survey to one staff person from each peripheral city employing either a municipal administrator (e.g., city manager) or chief planning officer (e.g., planning director). Based on the responses to this solicitation (see Appendix B), the team selected one peripheral city within each MPO jurisdiction. The respondents from the selected cities demonstrated an awareness of the concept of megaregions and indicated that multiple interregional or megaregional issues were affecting their local planning processes.



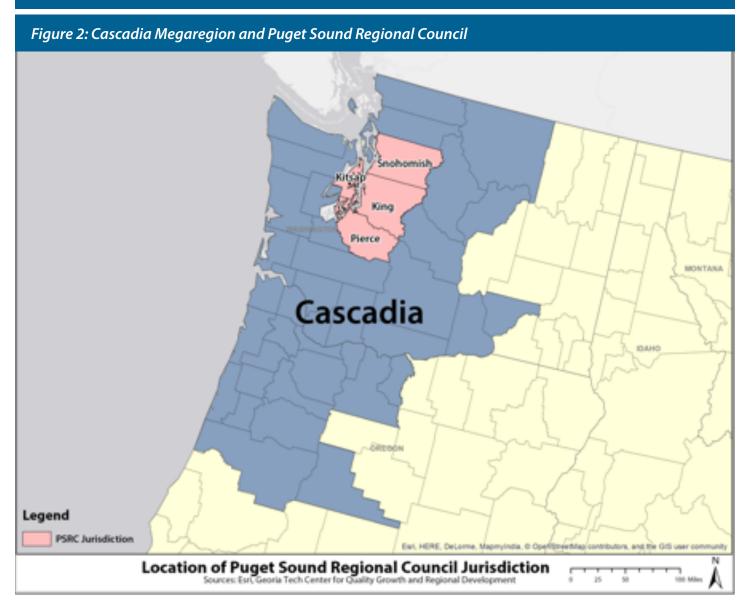
Megaregions are defined as networks of metropolitan areas that share economic, environmental, and cultural features, as well as infrastructure and geographic connections. The Center for Quality Growth and Regional Development and Georgia Tech identifies nine megaregions across the country.

Next, the project team reviewed the most recent officially adopted long-range transportation (or comprehensive) plans from the MPOs and the most recent officially adopted comprehensive plans from the two most populous cities in each MPO jurisdiction and the selected peripheral cities. Following this review, the project team interviewed at least one staff member from each entity.

Finally, based on interviewee responses, the project team reviewed other plans related to each entity's megaregional planning experiences.

Megaregional Planning in the Puget Sound Region

The Puget Sound Region is part of a larger economic cluster, the Cascadia megaregion, that extends from Portland, Oregon, to Vancouver, British Columbia. The Puget Sound Region and, at its center, the Seattle metropolitan area, represent the largest of the three major metropolitan areas that comprise the Cascadia megaregion.



Based on conversations with multiple actors across the Puget Sound Region, there is growing interest at the local and regional-scale for thinking beyond traditional MPO boundaries and working in a larger context. Seattle, Tacoma, Port Orchard, and the Puget Sound Regional Council operate within an area that is increasingly both economically linked to and shaped by the regions outside of it. The constituent regions of the Cascadia megaregion are stitched together by the Interstate-5 corridor, a critical transportation link essential to their economic growth and success.

Puget Sound Regional Council

The Puget Sound Regional Council (PSRC) was formed in 1991 to be consistent with the 1990 Washington State Growth Management Act. Washington's governor designated PSRC as the MPO under federal law and the Regional Transportation Planning Organization (RTPO) under state law for King, Pierce, Snohomish, and Kitsap Counties. PSRC is governed by a General Assembly, which meets annually to approve the budget and vote on major decisions, and an Executive Board, which meets monthly and serves as the governing board. General Assembly members include all elected local officials of PSRC member jurisdictions, while Executive Board members are appointed by General Assembly constituents to represent member jurisdictions. The Operations Committee, the Transportation Policy Board, and the Growth Management Policy Board provide recommendations to the Executive Board. These boards include member jurisdictions and tribes as well as business, labor, civic, and environmental stakeholders.

PSRC covers an area over 6,200 square miles and is comprised of four counties, 82 cities and towns, and 3.9 million people that call the region home. By 2040 the region is expected to add another million new residents (PSRC Regional Data). As the region grows and prospers, there is growing recognition that the economy is increasingly interlinked to places outside the four-county region and that the megaregion may be a more appropriate scale to address some of the larger interjurisdictional challenges. Programmatic areas of the agency beyond transportation include growth management (with focuses on creating regional economic centers targeted for housing and employment growth), plan review to ensure local and regional coordination, housing affordability, and transit-oriented development. Economic development includes a regional economic strategy to attract jobs and economic activity to the Puget Sound region and further develop the region's key industry clusters. PSRC uses performance measures to evaluate economic changes in the region to help keep the region economically competitive over time.

The Puget Sound Regional Council's formation in 1991 out of the old Puget Sound Council of Governments was necessitated by Washington's Growth Management Act (GMA). The Growth Management Act was adopted by the state in 1990 and requires counties to create comprehensive plans that meet certain requirements. Specifically, the plans must designate urban, rural, and natural resource lands, and protect the rural and natural resource lands by confining nearly all development within the urban growth areas for 20 years. It also seeks to coordinate planning among counties and municipalities within urban regions. *Vision 2040*, PSRC's long-range, integrated strategy document adopted in 2008 (and subsequently amended in 2009), discusses the authority and role of PSRC to coordinate its four member counties. Notably, the GMA provides for no statewide comprehensive plan. Instead, it creates a framework of state goals and growth management requirements (RCW Chapter 36.70A).

The GMA requires large regional councils like PSRC to adopt a more specific growth management strategy to comply with the statewide goals and multicounty planning policies to administer the growth strategy. These are outlined in *Vision 2040*. The strategy emphasizes development of "centers," compact concentrations of development that contain a mix of uses. *Vision 2040* envisions centers of varying sizes for all of the region's cities. The growth center concept fits within *Vision 2040*'s geographies framework, which divides the region's landscape into seven types. Metropolitan Cities (five cities) and Core Cities (14 cities) are the most urban types, and each have designated regional growth centers. Larger Cities (18 cities) and Small Cities (46 cities) are the next tiers of cities, each with similar levels of population and employment.

Charlie Howard, director of planning at PSRC, suggested that the GMA governance framework fosters a "bottom-up" style of planning in the region: "Our planning is tightly tied to the governments of our region. Local governments plan, and those local governments in turn govern us." He said this framework limits megaregional planning because "there is no natural governance structure for megaregions." Any megaregional planning, he said, is "a totally staff-driven exercise because there's no elected officials who have any authority across any kind of boundaries like that."

When asked if the PSRC discusses the concept of megaregions or interregional collaboration during long-range planning, Howard said: "The big answer is no. We talk on a regular basis to other MPOs up and down the I-5 corridor, but we haven't really done any regional planning with them." About issues that naturally involve collaboration with Portland or Vancouver, he said: "We've got our own pressing issues here that take precedence over anything we could think of that would be dealing with that." He suggested that they do share common issues, but those shared issues are "pretty well-functioning compared to some of the major urban issues that we have here."

Megaregional Planning Experience

In *Vision 2040* and *Transportation 2040*, the long-range transportation plan, the Puget Sound Regional Commission mentions several collaborative partnerships with organizations outside of the region. Most of this collaboration occurs within the state of Washington.

Transportation 2040, which was adopted in 2010 and updated in 2014, refers to PSRC's involvement with the Washington State Freight Mobility Strategic Investment Board (FMSIB). The FMSIB is a state agency that attempts "to create a comprehensive and coordinated state program to facilitate freight movement, and controls state funding for freight projects" (FMSIB 2016).

Howard confirms that the council participates in the Washington Department of Transportation's statewide freight plan. Robin Mayhew, of PSRC's transportation planning department, added that the council meets with all the other RTPO MPOs in the state quarterly about transportation issues. However, all of the staff interviewed agreed that PSRC coordinates with planning agencies within Washington far more than with those in Oregon or British Columbia. Howard attributed this to their "common growth management framework established by the state."

Mayhew and Howard also mentioned collaborating on planning studies with immediately adjacent jurisdictions to the north and south of the region, in places where intercounty commuting overwhelms transportation infrastructure. They did not identify any collaborative planning exercises involving PSRC beyond immediately adjacent jurisdictions, other than the statewide freight plan.

Ben Bakkenta, AICP, a program manager at PSRC, said his agency does use trips generated outside the region in its transportation models, but that the impact of those trips is small, so "it doesn't really factor into the technical analysis [we] do." Howard added: "The way our freight systems works is most of it comes in here and heads directly east, through the port. We're sort of an origin point for freight, because of our ports."

The PSRC also engages in megaregional planning by serving as the point of contact for federal efforts to improve infrastructure at the megaregional level. For example, the U.S. Department of Transportation has worked with the PSRC on expanding its national Marine Highways program (Loken 2015).

Transportation 2040 also cites PSRC's involvement with the West Coast Corridor Coalition (Freight Appendix, 82), a partner-ship with California, Oregon, Washington, and Alaska that included PSRC and many of its local governments. However, PSRC staff downplays the significance of the WCCC, which they identified as defunct. The inspiration for the WCCC, according to Howard, came from the I-95 Coalition on the east coast. But a power imbalance between California and the rest of the states, and lack of activity from Oregon, contributed to the WCCC "never really getting off the ground."

Bakkenta suggested that most of his organization's collaboration with outside MPOs occurred to share knowledge and best practices, not planning, and with metropolitan areas outside the Pacific Northwest. Activity in this area has increased in recent years, "not necessarily to achieve the same objective, but to learn from one another. (This process) seems more active and relevant than banding together with immediately adjacent metropolitan areas. When we are doing our work, we often look outside of our region, because we know what's going on here and we can usually learn more by looking outside of the region than just direct collaboration with our neighbors."

Megaregional Issues in Long-Range Plans

Vision 2040 and Transportation 2040 emphasize environmental preservation through the growth management strategy and continued economic dominance through improved freight mobility.

Transportation 2040 says: "It is important to recognize that planning for freight in the central Puget Sound region also requires looking outside the immediate four-county region to what is happening on the West Coast, the rest of the nation, as well as internationally," and specifically cites PSRC's involvement with America's Gateways and Trade Corridors (Freight Appendix, 82).

The Coalition for America's Gateways and Trade Corridors (CAGTC) is another partnership that includes the PSRC, but its focus is broader than corridor- and project- focused efforts like WCCC. It is a national interest group whose "sole purpose is to raise public recognition and Congressional awareness" of the need for sufficient freight and trade infrastructure funding (CACTC 2016).

PSRC's long-range transportation plan also addresses regional projects with megaregional implications. For example, it describes the FAST Freight initiative, a coalition of public and private partners in the region with the goal of promoting its freight gateway status by improving infrastructure. The FAST partnership recognizes the link the region provides between worldwide suppliers and markets and beneficiaries across the rest of the state and nation (PSRC 2006).

Table 1. PSRC and Case Study Jurisdictions

	PSRC Jurisdiction	Seattle	Tacoma	Port Orchard
Population estimates, July 1, 2014	3,925,661	668,342	205,159	13,266
Population, Census 2010	3,690,942	608,660	198,397	11,144
Population, Census 2000	3,275,847	563,374	193,556	7,693
Population, percent change 2000 to 2014 (est.)	19.8%	18.6%	6.0%	72.4%
Land area in square miles, 2010	6,267.3	83.9	49.7	7.2
Land area in square miles, 2000	6,290.0	83.9	50.1	4.0
Land area in square miles, percent change 2000 to 2010	-0.4%	0.1%	-0.7%	80.1%
Population per square mile, 2010	588.9	7,250.9	3,990.2	1,539.4
Population per square mile, 2000	520.8	6,717.2	3,864.9	1,913.7
Population per square mile, percent change 2000 to 2010	13.1%	7.9%	3.2%	-19.6%
Workers 16 years and older	1,867,862	363,209	90,772	4,575
Percent who lived in a Census-designated place	93.6%	100.0%	100.0%	100.0%
Percent who lived and worked in same Census-designated place	31.3%	73.8%	46.2%	26.1%
Percent who worked in county of residence	82.1%	94.3%	73.2%	82.8%
Percent who worked outside of state of residence	0.8%	0.8%	0.5%	0.3%
Percent who drove to work alone	69.7%	51.0%	76.4%	70.8%
Percent who worked at home	5.5%	6.7%	3.2%	4.8%
Mean travel time to work (in minutes)	28.3	26.0	25.6	27.6

Transportation 2040 explicitly refers to initiatives and partnerships mentioned above (the Washington State Freight Mobility Strategic Investment Board, West Coast Corridor Coalition, Coalition for America's Gateways and Trade Corridors) as exemplary of how the goals of the region can be met through interregional cooperation. For example, it recommends that PSRC "continue to take an active role to coordinate with regional groups that are working on issues of importance to freight and goods movement" (Freight Appendix, 85).

Transportation 2040 also holds the Northwest Ports Clean Air Strategy as an example of one of the documents Key Themes: "environmental planning efforts should be introduced in a cooperative manner" (Freight Appendix, 23). The organization is a collaborative effort between the ports of Seattle, Tacoma, and Vancouver to reduce emissions.

Transportation 2040 also devotes several pages to the megaregional, federally designated high-speed rail project, detailing the rail improvements to be made within the region that will contribute to the positive and far-reaching effects of the larger project. However, when asked about planning for high-speed rail, Howard said, "The state does the high-speed rail planning."

In *Vision 2040*, water quality goals are framed as follows: "The quality of the water flowing out of the region—including Puget Sound—should be as good as or better than the quality of water entering the region" (39). *Vision 2040* also mentions the Puget Sound Partnership, a state agency that aims to bring together various government and private entities to facilitate the recovery of the Puget Sound in a coordinated way. PSRC staff agreed that water quality and shared ecosystems were a common issue between their region and areas to the north, including Vancouver, but that coordination was at the state, not MPO level. Bakkenta said: "We have a state agency that looks at that, the Puget Sound Partnership, and presumably they're coordinating with counterparts in British Columbia. But that's not really a focus for us."

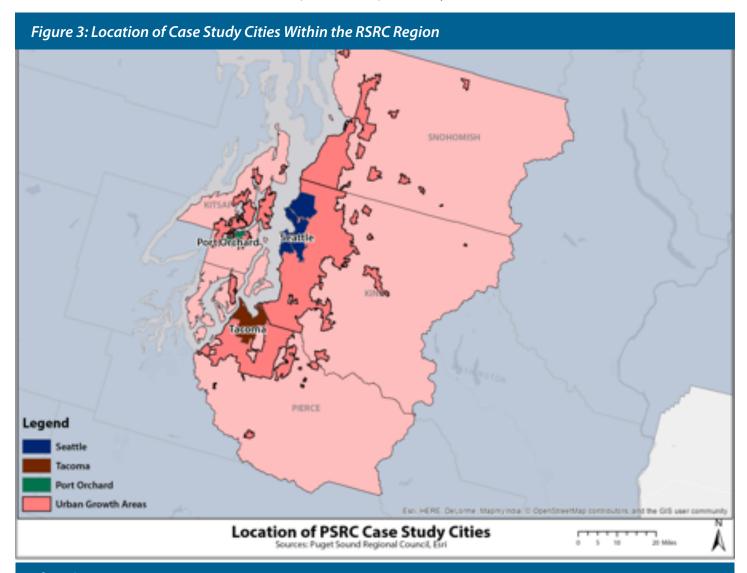
Limiting Factors

The interviewees identified several barriers to greater use of the concept of megaregions, in addition to suggesting the concept was not very relevant for them because of geography and development patterns.

Bakkenta said: "The big barriers would be two U.S. states, one Canadian province, all operating under completely different governing structures. Portland having a directly elected, more regional planning body that coordinates planning there. Ours is a more federated system, and [there is] something quite different in British Columbia. So just the technical and the policy details that we have to account for are completely different. Structurally we have those issues. We're speaking different languages in many respects."

Howard identified competition with other regions as a barrier to megaregional collaboration: "There's a lot of talk about the Canadian Ports and they've got nothing to gain by collaborating with us because they're trying to build a market that goes to the U.S. Midwest via their railroads." When asked if the Puget Sound region had anything to gain by collaborating with Canadian ports, he said "no, it's pretty much the same situation."

Howard and Bakkenta agreed that the megaregional concept is more relevant in a contiguous urban area like the I-95 corridor. Bakkenta described the vast rural and forested areas between the Seattle metro area and Vancouver and Portland and said that the "buffers in between the three metropolitan areas prevent any natural cohesion."



MULTIMODAL PLANNING AT THE MEGAREGIONAL SCALE | Interim Report

City of Seattle

Located on an isthmus between Puget Sound and Lake Washington, Seattle is the largest city both in the Puget Sound region and in Washington State (est. 2014 population 668,342). The city is also a major regional employment center, with nearly a quarter of all jobs in the region (Seattle 2035; PSRC Regional Data Profile). Seattle is located in King County, the largest and most populous county in PSRC's four-county planning area, and is one of King County's designated Metropolitan Cities under PSRC's *Vision 2040* (the other is Bellevue).

Seattle adopted its first comprehensive plan (*Towards a Sustainable Seattle*) under GMA in 1994. The current draft plan, *Seattle 2035: Your City, Your Future*, is the first significant update. The plan, which focuses on an urban village strategy for focusing growth, does not address megaregional issues.

Megaregional Planning Experience

For the cities in the Puget Sound region, there are three key influences on their local comprehensive planning processes: the Washington State Growth Management Act (GMA), PSRC's *Vision 2040*, and Countywide Planning Policies (CPPs). This framework encourages interjurisdictional collaboration within the region. King County's strategic plan highlights the importance of cooperation between the county and jurisdictions within its boundaries, and *Vision 2040* states that this framework not only promotes collaboration among jurisdictions, but "allows adjustments to be considered in a regional context."

Seattle's draft comprehensive plan meets requirements of GMA, and reflects the framework and policies of PSRC's *Vision 2040* and King County's CPPs.

Megaregional Issues in Long-Range Plans

While Seattle's plan does not explicitly address the concept of megaregions, it addresses regional and interregional issues.

Seattle's draft comprehensive plan incorporates growth projections generated through the regional planning process. Under these projections, Seattle is planning for 120,000 new residents, 70,000 new housing units, and 120,000 new jobs. The draft comprehensive plan focuses on concentrating 80 percent of this growth in urban villages, urban centers, and manufacturing/industrial centers. These urban villages are based on historic patterns of development, reflect where most multifamily and commercial zoning is found in the city, and account for approximately 20 percent of the land area, making it easier for the city to provide services, prioritize investments, and attract transit service. This strategy also reflects the regional framework of concentrating growth in existing Regional Growth Centers within Metropolitan and Core Cities, as well as the King County's CPPs.

Tom Hauger, the comprehensive and regional planning manager with Seattle's Office of Planning and Community Development, identified transportation as the most important interregional issue. The population is projected to grow to five million by 2040—and Seattle is at the center of the region's growth. As the city grows, it is looking for support from the regional planning process for increased transit service, whether that is bus or light rail or commuter rail. *Vision 2040* provides guidance on this, directing more service to the central city.

In the city's comprehensive plan, there is an emphasis on expanding multimodal transportation options, including transit, bicycle, and pedestrian options and reducing single occupancy vehicle trips. Due to its role as the population and employment center of the Puget Sound region, Seattle's comprehensive plan also addresses issues of transportation connectivity within the region. This includes goals and policies related to managing regional transportation demand and working with regional partners to enhance cross-jurisdictional service.

Social equity is also addressed as a central issue in the comprehensive plan. The plan includes data related to current disparities and indicators for defining and measuring success. This is in line with both *Vision 2040*, which has equity as a core part of its vision and policies, and the *King County Comprehensive Plan*, which has "address equity, social, and environmental justice" as one of its eight guiding principles.

Limiting Factors

Hauger notes that the lack of institutional authority is a barrier to addressing the concept of megaregions in local plans: "I think part of the reason for this is that there is just not much legal authority and so the planning would have to be cooperative. And everybody is so focused on the area in which they do have authority that they probably don't have the resources to look beyond that area."

In order for megaregional planning to take hold, Hauger suggests the presence of a viable project may engage people around the issue: "If there was a clearer path and more likely funding for transportation connections across a larger region—say something like Cascadia—so if we were talking about a high-speed rail connection from Vancouver, British Columbia, down into Oregon, and it looked like that was a real possibility, I think people would engage in planning."

City of Tacoma

Located on Commencement Bay on the southern edge of the Puget Sound, Tacoma is the second largest city in the Puget Sound region and the third largest in Washington State (est. 2014 population 205,159). Tacoma is the Puget Sound Regional Council's designated Metropolitan City in Pierce County. Tacoma is also home to the Port of Tacoma, one of the largest container ports in North America and a major regional employer.

The city adopted its first comprehensive plan under the GMA in 1993, and it adopted its most recent comprehensive plan, *One Tacoma*, in December 2015. The plan meets the period review requirements of the GMA and complies with PSRC *Vision 2040* and Countywide Planning Policies. While the plan addresses regional and interregional considerations, it does not address megaregions.

Megaregional Planning Experience

Tacoma's comprehensive plan is situated within the framework of the GMA, Vision 2040, and the CPPs.

Within the PSRC region, Tacoma engages in regional and interregional planning activities through the Transportation Policy Board and the Growth Management Policy. These boards work on funding priorities for affordable housing and transportation.

Megaregional Issues in Long-Range Plans

Tacoma has not explicitly addressed megaregional issues in *One Tacoma*. However, interregional planning efforts have informed the comprehensive plan goals and recommendations through *Vision 2040*.

The primary issues that Tacoma is addressing both locally and regionally are the basics of housing, jobs, and transportation. The comprehensive plan incorporates growth projections, including 127,000 new residents (59,000 new housing units) and 97,000 new jobs. Regional population and employment figures included in *One Tacoma* show that other cities within the region have a higher number of jobs relative to housing (1.2 in Tacoma, compared to 1.6 in Seattle and 2.2 in Bellevue) and that Tacoma's jobs-to-housing ratio has trended downward over time, counter to the growth projections.

Steve Atkinson, a senior planner with the city's Planning Services Division, noted that the comprehensive plan addresses these projections in terms of what can be done locally: "Do we have the capacity to meet those things and do we have the supportive policies, not necessarily that we can create the market to accommodate that, because again, it's a regional marketplace."

In terms of housing, the CPPs specify a goal of low-income affordable housing for 25 percent of the adopted population growth target. Housing in Tacoma is considered to be very affordable within the regional marketplace, but there is not enough affordable housing to meet local needs.

Within these three core areas of housing, jobs, and transportation, Atkinson emphasized the idea of planning regionally to "bend the trend" in order to address jobs-housing imbalances throughout the region. "Currently there are a lot of trends moving away from suburbanization," he said of growth in the region, "but now you're almost in this reverse situation where the centers, some centers, are almost becoming too successful."

Transportation funding, which is directed toward growth areas, can further the growth trends. Currently, Tacoma is seeing transportation investments that facilitate commuting from Tacoma to Seattle (currently, nearly 24 percent of Pierce County residents commute to jobs in King or Snohomish Counties, while just under 72 percent work within the county) instead of transportation investments to facilitate job growth in Tacoma. Atkinson emphasized that *Vision 2040* policies are regionally oriented toward making transportation investments that do not just respond to growth, but also stimulate growth within the designated growth areas, and that the city is working with the regional planning processes.

Outside of comprehensive planning efforts, the city has engaged in two water resources inventories. "It's not megaregional, but we're sort of recognizing that a lot of those watershed issues are not just driven by what we do here, they are inherently connected to all the other jurisdictions along that watershed," Atkinson said.

Tacoma is also incorporating climate considerations into planning efforts, looking at what they can do locally while recognizing that air quality and related concerns are interregional issues. The city adopted its *Climate Action Plan* in 2008.

Limiting Factors

In describing why the city has not addressed megaregional issues, Atkinson noted that the concept had not been raised by either policy makers or the public. He described the focus on the four-county PSRC region, particularly neighboring Seattle and King County and the "immediate constellation of other cities."

Atkinson also described the connections between planning and local experience as a central component of engaging the community and a potential challenge for addressing megaregions: "It's harder to make those connections. Obviously our residents have a very local lived experience and to some degree, it's easier as a planner to make the connections between the lived experience someone's having today and having a hard time with their commute or having a hard time finding housing that is affordable or meets their needs or having a hard time finding a job that's close to home."

He further noted, "It's much easier to make those connections still regional—almost that geography of proximity. As you start to get farther away, those issues may still be connected. Obviously, our economy is influenced globally, nationally. . . . It's a lot harder to start to quantify some of those broader issues of scale than situating it within the more immediate, proximate regional markets."

City of Port Orchard

Located on the Sinclair Inlet of the Puget Sound, Port Orchard (est. 2014 population 13,266) is the county seat of Kitsap County, Washington. Kitsap County is the third most densely populated county in Washington State and the smallest county in the PSRC four-county planning area, both in population and land area.

Port Orchard is within the region's contiguous urban growth area and is designated as Small City within the urban growth area. Port Orchard is currently undergoing a comprehensive plan update, as required by the Washington State Growth Management Act. The city's comprehensive plan was last updated in 2008, and the current version most recently amended in 2014. The comprehensive plan does not address the concept of megaregions.

Megaregional Planning Experience

As with Seattle and Tacoma, Port Orchard's comprehensive planning is situated within the framework created by the Washington State Growth Management Act (GMA), PSRC's Vision 2040, and the CPPs.

Nick Bond, AICP, Port Orchard's development director, highlighted the city's participation in the West Sound Alliance. The West Sound Alliance is a partnership among 19 jurisdictions and economic development organizations in Kitsap, Pierce, and Mason Counties in the West Sound region. Beginning in July 2014, the members of the West Sound Alliance have worked together to prioritize requests for funding in transportation investments to the Washington State House and Senate. The Alliance grew out of the recognition that working collaboratively to secure transportation investments could lead to better

results than jurisdictions pursuing funding independently, and could also support quality of life and economic development goals. Prioritization of projects and related planning considerations are largely rooted in the location of manufacturing centers and naval facilities.

However, Bond notes that these issues are addressed interregionally and not at a megaregional scale: "When you talk about megaregions, I think there is an implicit understanding that our ports and our facilities operate at megaregional scale, but for us, our main goal is to allow them to get in and out of the region more so than what they do once they are out of our metropolitan area."

Megaregional Issues in Long-Range Plans

Port Orchard has incorporated *Vision 2040* population and housing data into its comprehensive plan. This data will also be included in the 2016 update, which is currently taking place. For the city, the 20 year planning period projects 8,235 new residents and 3,132 new jobs. "Port Orchard is such a small piece of the region," Bond said of the planning context and regional growth. "We are drowning in growth to the point that we are just trying to keep up."

The most significant issue referenced by Bond is transportation. Port Orchard's comprehensive plan contains goals related to encouraging a multimodal transportation system that supports local, county, and regional priorities, as well as creating a transit-oriented development program with coordination between local and county entities.

Bond also notes parks and open space as an important issue that expands beyond local boundaries: "We see our parks plan as part of what makes Port Orchard an attractive place to live and so the businesses that are operating at this regional scale need to have happy employees and be able to attract their employees to the area and our parks plan supports that, although maybe not explicitly."

Port Orchard's comprehensive plan addresses the regional context within the Puget Sound region. The Parks Chapter provides policy support for countywide open space acquisition, while the Natural Systems Chapter includes policies for using nonregulatory means to preserve the biological diversity of Port Orchard and Puget Sound. The city's *Comprehensive Parks Plan* provides further support for these linkages, particularly in references to shorelines and regional trails.

Limiting Factors

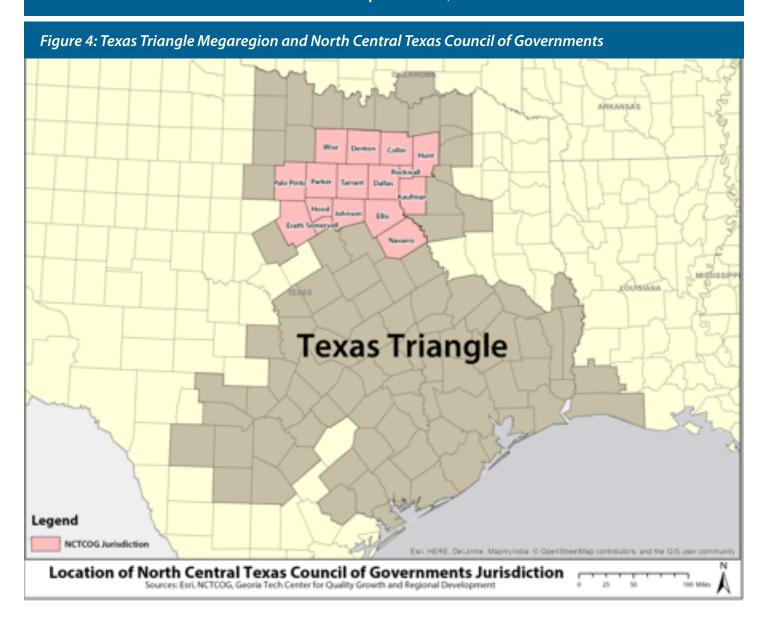
Bond noted the challenges of the relationship between planning in Washington and planning in Oregon. Both states have strong planning frameworks, but the Oregon model is considered to be more of a top-down process, while, under Washington's Growth Management Act, is considered more locally driven (Tovar and McCormick 2015). This creates the potential for disconnect between state governments, agencies, and approaches as a challenge for addressing megaregional issues in Cascadia.

Megaregional Planning in North Central Texas

North Central Texas is a massive region, with an area greater than the state of Maryland and a population larger than 36 states, surrounding the cities of Dallas and Fort Worth. It is located in the northern third of the Texas Triangle megaregion, which also includes the less-populous metropolitan areas of Houston, San Antonio, and Austin and extends into southern Oklahoma and western Louisiana at its northernmost and easternmost extremes, respectively.

Based on conversations with multiple actors, it is clear that Dallas, Fort Worth, Sanger, and the North Central Texas Council of Governments are all interested in taking advantage of megaregional forces; however, a lack of formal governance mechanisms and political will have, thus far, limited megaregional planning efforts. The Texas Triangle is an economic unit where the competition is national and global in scale, and projects like the new high-speed rail line being planned with private dollars to serve Dallas and Houston have the potential to significantly shape the economic course of the megaregion.

The tremendous population and employment growth of North Central Texas over the past several decades is due in part to



its access to Interstate 35, also known as the "NAFTA Superhighway," a major freight corridor that goes through Dallas-Fort Worth and facilitates commerce between United States and Mexico.

North Central Texas Council of Governments

The North Central Texas Council of Governments (NCTCOG) is a regional association of local governments representing 16 counties, two major metropolitan areas, and 230 member governments. The massive NCTCOG region has a population larger than 36 states. As the area's metropolitan planning organization, NCTCOG carries out federal responsibilities for transportation programming and planning at the regional scale. Beyond its MPO role, NCTCOG has initiatives around workforce development, increasing emergency preparedness, and uses creative approaches to funding some of its programs. NCTCOG is a partner in the Regional Toll Revenue Program, which allows the agency to use additional revenues towards activities that benefit the region.

NCTCOG and the Regional Transportation Council have since 1974 served as the Metropolitan Planning Organization for the Dallas-Fort Worth area. NCTCOG is governed by a 17-member Executive Board of local elected officials and one ex-officio, nonvoting member of the state legislature. The board, which meets monthly, is supported by technical, study, and policy

development committees and NCTCOG staff. The board sets the policy for regional planning and coordination in the North Central Texas region and is the Metropolitan Planning Organization's fiscal agent.

The 44-member Regional Transportation Council, comprised of local elected or appointed officials and representatives from the transportation providers in the region, sets the MPO's transportation policy and guides the decision-making process. The Regional Transportation Council relies on the advice from technical committees, made up of staff from area government bodies that review, comment on, and prepare recommendations for transportation improvements.

Megaregional Planning Experience

According to Director of Transportation Michael Morris, the MPO discusses the concept of megaregions "all the time" and that they "use a map, but it's a different map than the one you have" that includes Tulsa, Oklahoma City, Shreveport, Little Rock, San Antonio, Waco, and Austin, but excludes Houston. Morris notes that the key factor in NCTCOG's megaregional planning efforts has been its ability to sign memorandums of understanding (MOU) with its neighbors, such as the MPOs in Waco, Texas; Little Rock, Arkansas; and the rail authority in Austin/San Antonio. Each MOU has its own emphasis area, for example freight for MOUs with southern neighbors, passenger rail with Oklahoma City, and dynamic message signs with Waco's MPO. Senior Program Manager Dan Lamers cautions that "the MOUs are not formal so much as they are ceremonial. [They] don't help us spend money out there, but it does send some sort of message that we are interested in making sure that we're planning some of those large corridors in a way that's beneficial to all sides."

Water planning is an area that requires interregional planning efforts. The Texas Water Development Board (a state agency) is responsible for coordinating long-range water supply planning and project financing. For these purposes, the state is divided into 16 regional water planning groups, and NCTCOG's jurisdiction straddles Regions C and G. The Board recently mediated a conflict between Regions C and D (in Northeast Texas) over a new reservoir (the proposed Marvin Nichols Reservoir Project in Red River County). The board initially allocated the rights to this reservoir, physically located in Region D, to Region C, but subsequently adjusted this allocation to give 20 percent to Region D.

Meanwhile, NCTCOG uses subwatershed boundaries that extend beyond the MPO boundaries. Lamers links the impetus behind expanding the geographic scale to drought: "We have dipped our toes—no pun intended—into the megaregion water planning discussion. I wouldn't say it's anything you would find in any of our documents or our publications. But being in the middle of Texas, generally we have a drought going. Water may be the single biggest constraint to our growth in the future. It's starting to really hit home with us. This uncontrolled sprawl will not be good for water planning and infrastructure planning." However, Lamers states that the water planning geography does not extend to as large an area as the Texas Triangle megaregion.

In general, it seems that there is awareness of the megaregion concept, but not necessarily action tied to the term "megaregion." Lamers admits, "We are somewhat limited in terms of what we plan for in terms of megaregions, but at the same time ... we certainly are doing some and it's under a different banner."

Megaregional Issues in Long-Range Plans

Despite bringing megaregional issues to the table with neighboring regions and states, NCTCOG's Program Manager Chad McKeown, AICP, admits that "there is no discussion regarding megaregions in the [long-range plan]." NCTCOG's most recent long-range plan, *Mobility 2040*, was approved in early March 2016. Its content is largely similar to *Mobility 2035*, which was adopted in 2011, but *Mobility 2040* expands its focus on environmental stewardship, according to Morris.

McKeown notes that *Mobility 2040* includes a discussion of high-speed rail (which is also a component of *Mobility 2035*). Morris also spoke about high-speed rail, and how NCTCOG has been collaborating with the private partner, TxDOT, and the Federal Railroad Administration. The MPO's role has been public outreach, communication with the Texas legislature, analyzing accessibility within the region, and providing data to the private partner, Texas Central Partners. Morris notes that Texas Central Partners would not have the capacity to obtain or analyze the data needed for the project, so NCTCOG's role is critical in this regard.

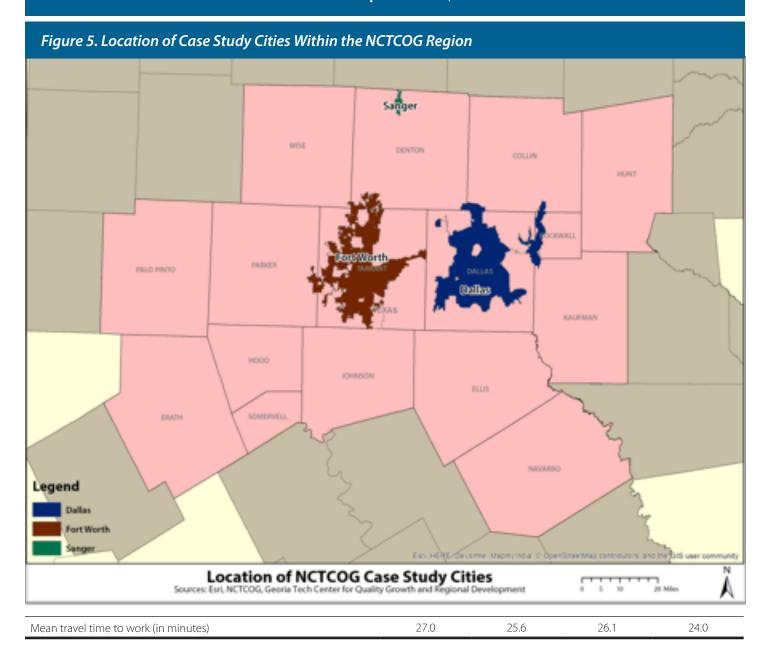
For its research about high-speed rail, NCTCOG has used Census data for areas outside of the MPO boundaries, extending as far as Texarkana, Texas, on the Louisiana border and Shreveport, Lousiana. Lamers said that the use of such data would not normally be part of MPO practice. However, he explained, "About five years ago, we started to talk about the growth within our region. We're anticipated to be almost 11 million people by 2040.... What are we going to do with [an extra four million] people? Do we have the resources to support that many people? If we can't make it convenient for those people to be here, are they indeed going to come here? We started to look at it from a competition standpoint, from an attractiveness standpoint. If we can't solve our infrastructure problems, we risk stagnating or worse declining economically because of our proximity to these [other] large urban areas." He also mentioned interregional cooperation: "We were also talking to our COGs within the state that neighbor us or adjoin us about common infrastructure planning, and from that point on it really got into the rail side of things.... Now we are looking at it from an opportunistic standpoint."

Though not explicitly labeled as "megaregional" in *Mobility 2040*, freight and aviation are important components of the plan. Morris identified freight as the most important megaregional issue for the Texas Triangle. "DFW is the largest inland metropolitan region in the country, so freight and intercity movement is very important to us," he explains. The second most important issue, in Morris'eyes, is aviation. The fact that the "DFW Airport sits on the MPO board" is "very unique" and allows for improved collaboration.

However, not all issues should be addressed from the megaregional perspective, according to Morris. He points to affordable housing as an issue that a city needs to resolve within its boundaries, and certain environmental issues such as green space and water as regional, but not necessarily megaregional issues. Morris points out that Dallas needs more green space, but Dallas citizens are not benefited by more green space in Oklahoma City. He specifically mentions environmental justice and the fact "with EJ, there's a proximity to it. You can't balance things across a megaregion." Interregional collaboration is "not to spread the benefit and burden across a large geography." Instead, Morris feels that for environmental issues, interregional collaboration is about making sure NCTCOG's goals aligns with those of Texas Parks and Wildlife Department and U.S. Fish and Wildlife.

Table 2. NCTCOG and Case Study Jurisdictions

	NCTCOG Jurisdiction	Dallas	Fort Worth	Sanger
Population estimates, July 1, 2014	7,070,768	1,281,047	812,238	7,601
Population, Census 2010	6,539,950	1,197,816	741,206	6,916
Population, Census 2000	5,309,277	1,188,580	534,694	4,534
Population, percent change 2000 to 2014 est.	33.2%	7.8%	51.9%	67.6%
Land area in square miles, 2010	12,322.3	340.5	339.8	10.9
Land area in square miles, 2000	12,368.3	342.6	292.5	3.1
Land area in square miles, percent change 2000 to 2010	-0.4%	-0.6%	16.2%	246.8%
Population per square mile, 2010	530.7	3,517.6	2,181.2	635.3
Population per square mile, 2000	429.3	3,469.8	1,827.8	1,443.9
Population per square mile, percent change 2000 to 2010	23.6%	1.4%	19.3%	-56.0%
Workers 16 years and older	3,234,915	576,896	347,865	3,595
Percent who lived in a Census-designated place	92.6%	100.0%	100.0%	100.0%
Percent who lived and worked in same Census-designated place	35.8%	63.6%	60.4%	24.9%
Percent who worked in county of residence	69.9%	82.3%	84.0%	70.4%
Percent who worked outside of state of residence	0.9%	0.6%	0.7%	4.3%
Percent who drove to work alone	80.9%	77.0%	81.8%	86.9%
Percent who worked at home	4.7%	4.2%	3.3%	3.8%



Limiting Factors

The main reason why NCTCOG has not been able to engage in more megaregional planning is funding. Lamers states, "As an MPO, most of our funding is to deal with issues within our area—most of our funding has that restriction.... When we do this work with the other COGs and regions, we generally have to charge it to our local funds." Other limitations include travel time. "It's a day-and-a-half trip to have a meaningful meeting with Houston," notes Lamers.

Specific areas face specific challenges. Though NCTCOG has participated in the statewide planning process, Program Manager Kevin Feldt, AICP, attributes the lack of megaregional freight planning to the fact that "freight does not have a high level of understanding amongst the policy makers." In addition, the fractured nature of the freight industry, its capacity for greater flexibility (particularly for truck freight) and its shorter planning horizon makes cooperation more difficult. Feldt notes, "Long term to them is a shorter time period than our short time period . . . for us to plan for what the future is for freight is extremely difficult because we don't know if there's going to be more rail usage or drone usage or if all the Wal-Marts out there today are going to be distribution centers instead of retail centers."

Some of these uncertainties could be addressed by better data. However, the sheer amount of data needed is not feasible. According to Lamers, "We worked a few years ago with Texas Southern University down in Houston. Dr. Carol Lewis is somewhat of a megaregions expert. We actually hired them to see if there was a way we could adapt and create an interregional or megaregion scale travel demand model. It didn't really pan out like we thought it would." Feldt explains that the Dallas Fort-Worth regional model has over 7,000 Traffic Analysis Zones (TAZs), and Houston probably has a similar number, so megaregional model would need to include 14,000 TAZs plus another thousand for the rural areas in between. "We have enough trouble forecasting demands within our region, much less between regions. When you start looking at megaregions scale, you need a whole different tool," says Feldt.

One environmental issue for which NCTCOG has unsuccessfully sought more megaregional collaboration is air quality. Morris says, "We've tried to push a larger megaregion component in air quality. We are downwind from Louisiana. Their areas are not in nonattainment. We are. We're getting their emissions. . . . No one wants to sign up to reduce emissions when they are in attainment of standards." In general, Morris feels that NCTCOG is engaging in a lot of megaregional efforts, but that the key to success is mutual benefit, and the lack thereof is the greatest limiting factor: "The notion of a larger geography of planning has to have benefits to both parties to work together. If you don't have that, it's the largest inhibitor to cooperation." Lamers, McKeown, and Feldt echoed Morris' sentiments, but also noted that there is the struggle of a lack of cooperation and understanding between urban and rural areas even within a region.

City of Dallas

Dallas is the most populous city in North Central Texas (est. 2014 population 1,281,047) and the largest by land area (340.5 square miles in 2010). It is also the region's largest employment center. According to NCTCOG's Regional Data Center, the city was home to more than 25 percent of all jobs in the region in 2013. Dallas continues to grow in population, but over the past several decades the surrounding region has grown faster. The city adopted its first comprehensive plan in 2006, just as the concept of megaregions was beginning to gain attention outside of academic circles. Even though the megaregions concept is not explicitly discussed, the plan does demonstrate an interest in taking advantage of megaregional forces for local economic development.

Megaregional Planning Experience

While Dallas has been very active in regional planning efforts in North Central Texas, Peter Chacko, AICP, the city's director of planning and urban design, does not recall the city participating directly in any megaregional planning efforts. However, the head of the city's water utility does serve on the Texas Water Development Board's Region C Planning Group, and this group periodically prepares water supply plans for a 16-county region that extends beyond NCTCOG's jurisdiction. Also, city officials have been publicly supportive of private efforts by Texas Central Railway, LLC, to build a high-speed passenger rail network between Dallas-Fort Worth and Houston (Rawlings et al. 2014).

Megaregional Issues in Long-Range Plans

Dallas adopted its first comprehensive plan, forward!Dallas, in 2006 and has no immediate plans for an update. According to Chacko, city staff first became aware of the concept of megaregions around the same time as the forward!Dallas planning process, but the plan itself makes no explicit reference to megaregions. Chacko says this is due in part to the relative newness of the concept and to the city's intention to keep the plan focused on policies and actions within the city's direct control.

While he does not recall staff using any specific interregional or megaregional data in the *forward!Dallas* planning process, Chacko recalls a high level of awareness about the city's strategic position along major highway and rail corridors that facilitate NAFTA-related trade and the movement of goods from ports on the West Coast. In fact, the plan includes a series of recommendations related to creating and supporting an inland multimodal port in the southern part of the city, with ready access to Interstates 20, 35, 635, 30, and 45, as well as multiple rail corridors. These recommendations include strengthening partnerships with port cities, railroads, and state and federal agencies.

After the plan was adopted, the city partnered with Dallas County and the neighboring cities of DeSoto, Hutchins, Lancaster, and Wilmer to create the International Inland Port of Dallas. According to the port's website, the site includes more than 12 million square feet of warehousing space and is home to major logistics facilities for more than 20 companies.

Although high-speed rail planning in Texas was still in its infancy in 2006, the city has subsequently taken a serious interest in supporting high-speed rail development to facilitate day trips between Dallas and Houston. In 2011 the city adopted *Downtown Dallas 360*, a subarea plan developed in partnership with the downtown business community. The plan recommends positioning Dallas's Union Station as a high-speed rail hub for service throughout the Texas Triangle. Since adoption of this plan, the Texas Central Railway, LLC, has moved forward with a specific proposal to connect Dallas and Houston with high-speed rail. According to Chacko, this proposal is a significant driver for an ongoing update of the city's downtown plan, which he anticipates will include "a more well-defined station location and more specific time frame and opportunities with regard to connectivity and development potential."

Another interregional issue not discussed in *forward! Dallas* but of clear importance to the city is water supply management. The city water utility's latest long-range plan, *2014 Dallas Long Range Water Supply Plan to 2070 and Beyond,* documents all of the reservoirs that currently supply drinking water to the city and details a series of water infrastructure projects that will be necessary to accommodate projected growth. More than 21 percent of the city's current water supply allocation comes from reservoirs in East Texas, outside of NCTCOG's jurisdiction (though not all of these supplies are currently in use). The plan acknowledges the combined pressures that rising temperatures, sedimentation, and development will put on the city's water supplies between now and 2070, and recommends building a pipeline to Lake Palestine, outside of NCTCOG's jurisdiction, to partially satisfy future demand.

Limiting Factors

Chacko says there is not a long history of comprehensive planning in Dallas, and there is a lot of interlocal competition for jobs and residents in North Central Texas. "Part of the spirit behind our *forward! Dallas Comprehensive Plan* was to take charge of our destiny and be an aggressive player within our region," says Chacko. "The reason why we didn't spend a lot of energy talking specifically about megaregions is that it would not have gained any particular mileage with our council to speak specifically about megaregional issues when there was no forum or framework for us to take action within that context."

Chacko thinks there are a number of regional challenges that must be addressed before the city will be ready to systematically think beyond the region. North Central Texas has an acute shortage of affordable housing, and according to Chacko, there is currently no regional policy or program to address this shortage.

In practice, Dallas has absorbed a disproportionate share of the regional demand for affordable housing, due in part to exclusionary zoning practices in many suburban localities and in part to Dallas having the oldest housing stock. Chacko says this pattern threatens to undermine the stability of certain neighborhoods and makes an affordable housing policy a tough sell politically, both in Dallas and in the wider region.

In the near term Chacko anticipates the city will continue to address interregional and megaregional economic issues in its planning work, provided the focus is on taking advantage of economic trends or forces for local gain. "Everybody likes economic development, so that's where I think the main opportunity lies for us."

City of Fort Worth

Fort Worth is the second most populous city in North Central Texas (est. 2014 population 812,238) and the second largest by land area (339.8 square miles in 2010). It is also the region's second-largest employment center. According to NCTCOG's Regional Data Center, the city was home to more than 11 percent of all jobs in the region in 2013. The city has updated its comprehensive plan annually since 2000, but the plan has yet to explicitly address the concept of megaregions. However, the plan demonstrates an awareness of local economic development opportunities tied to megaregional trends related to shipping and trade.

Megaregional Planning Experience

According to Randle Harwood, Fort Worth's director of planning and development, most of the city's direct experience with interregional or megaregional scale planning comes through state transportation planning projects. For example, Fort Worth staff serve on the Segment One Planning Committee for the state's *My35* planning initiative, which is a long-term effort to improve safety and lessen congestion along the I-35 corridor from the Mexican border up to the border with Oklahoma. And like Dallas, Fort Worth's elected leaders have been publicly supportive of private efforts by Texas Central Railway, LLC, to build a high-speed passenger rail network between Dallas-Fort Worth and Houston (Rawlings et al. 2014).

The city's direct experience with interregional or megaregional water supply planning also mirrors that of Dallas. Fort Worth's water department director serves on the Texas Water Development Board's Region C Planning Group and participates in the periodic preparation of water supply plans. Harwood says the city is aware of interregional and megaregional tensions surrounding water supply management. In fact he sees potential conflicts over water as a justification for including parts of Oklahoma in any future megaregional water planning initiatives for the Texas Triangle.

Megaregional Issues in Long-Range Plans

Fort Worth adopted the original version of its current comprehensive plan in 2000. Each year the city reviews and updates the plan, and in 2009 local officials adopted new plan goals, policies, and strategies. The 2015 Comprehensive Plan contains revised demographic, economic, and financial information, but does not update the plan's policy language.

Harwood says much of the data that informs the plan came from NCTCOG, but he is not aware of the city using any interregional or megaregional data sets in its planning processes. The current version of the plan does not make any explicit references to the concept of megaregions, and Harwood does not remember anyone bringing this concept up during the 2009 or subsequent update processes. Nevertheless, the 2015 Comprehensive Plan does acknowledge specific interregional and megaregional issues. For example, the Existing Conditions & Trends section of the Transportation element references TxDOTs high-speed rail planning efforts, and the Goals and Objectives section of this element recommends coordination with TxDOT on all state projects within city limits.

The plan's Transportation element also discusses the Tower 55 freight rail intersection in downtown Fort Worth, which is a major bottleneck with megaregional effects on freight traffic. According to Harwood, idling trains waiting to make turns at the at-grade intersection between Union Pacific and Burlington Northern Santa Fe lines have been blocking roadways and exacerbating local and regional air quality problems for years.

Meanwhile, the 2015 Comprehensive Plan's Intergovernmental Cooperation element references the Trinity River Authority, which provides water resources planning for the Trinity River Basin, which spans 20 counties extending from Galveston Bay to North Central Texas. However, the plan does not include any specific policy language related to the authority, and the city's direct participation is generally limited to coordination on projects within city limits.

While not specifically referenced, Harwood says the *My35* planning effort had a major influence on many of the specific capital improvements listed in the plan. And he believes an increased awareness of the city's strategic position along I-35 and at the confluence of several major rail corridors is spurring conversation about how the city can best position itself to take advantage of freight traffic. "We have a huge intermodal transportation center near the Alliance [general aviation] airport, and we're thinking about rail between here and Long Beach and here and Houston," says Harwood.

While Fort Worth's economic development goals related to its intermodal facility seem to be in direct competition with Dallas's inland port, Harwood thinks there is enough growth potential for the region to support both.

Limiting Factors

According to Harwood, the city simply doesn't have enough staff capacity to coordinate more broadly on interregional or megaregional initiatives. In his view, the city is looking to NCTCOG to take the lead, with city staff playing a support role. "I have enough resources to get to NCTCOG [meetings] and participate in their regional or interregional discussions," he says.

"But the focus of our efforts are local; there's no question about it." Unlike Dallas, Fort Worth has considerable room to expand its borders through annexation. In fact, the city's extraterritorial jurisdiction is nearly as large as its existing city limits. One consequence of this is that the city is generally preoccupied with local growth and development decisions.

City of Sanger

Sanger is a small, but rapidly growing, city (est. 2014 population 7,601) on the northern border of Denton County, which is also the northern border of NCTCOG's jurisdiction. It is bisected by I-35 and positioned approximately equidistant from major suburban employment centers near Dallas/Fort Worth International Airport and the massive WinStar World Casino and Resort, just north of the Texas-Oklahoma border.

Megaregional Planning Experience

Joseph Iliff, AICP, Sanger's director of development services, is not aware of the city participating directly in any interregional or megaregional planning initiatives. There are two ongoing efforts that directly affect Sanger: (1) TXDOT's planning work for the expansion of I-35 and (2) the Texas Water Development Board's water supply planning groups. However, no official Sanger representatives serve on the committees for these initiatives.

Megaregional Issues in Long-Range Plans

Sanger adopted its first Comprehensive Land Use Plan and Thoroughfare Plan in 2007 and, like Dallas, has no immediate plans for an update. Like most small-town comprehensive plans in Texas, the plan provides a high level overview of land-use principles, future land-use designations, and a functional classification of all major thoroughfares in the city. It also includes proposed locations for future parks and a short discussion of economic development goals.

The plan does not explicitly reference the concept of megaregions, nor does it discuss any interregional or megaregional issues. According to lliff, this doesn't mean the city is unaware or uninterested in some of the interregional and megaregional forces that affect Sanger's future growth and economic development potential.

Perhaps the most important issue affecting Sanger's long-term trajectory is water supply. The city owns and operates its own water system. Most of its water supply comes from local groundwater (the Trinity Aquifer), but the city also purchases a small amount of water from the Upper Trinity Regional Water District. As Sanger continues to grow, it will need to source a larger percentage of its water from the regional water district, and the cumulative projected future demand for water means the Upper Trinity Regional Water District will soon have to source more of its water from East Texas.

Consequently, the city is investing in a new municipal well. "We're approaching megaregional water issues differently because we see the pressure of the regional demand," says Iliff. "From a land-use point of view, it's incredibly important for us to secure a water supply now to set ourselves apart from the rest of the county and the other areas around us. It's not a matter of economic development incentives or tax rebates; those other areas won't have water."

lliff sees other megaregional issues related to transportation infrastructure affecting the city; however, for those issues, the city seems to have less control over its fate. For example, plans to expand I-35 will dramatically reshape Sanger physically and open the door to new economic development opportunities, but the city has little control over when that expansion will actually happen. Similarly, a Burlington Northern Santa Fe rail corridor passes through the city, but with other intermodal freight facilities in the region, the railroad is not interested in pulling a spur to serve Sanger.

Limiting Factors

According to Iliff, the city has a knowledge gap when it comes to responding to interregional and megaregional issues and opportunities. Because Sanger is a small city, it has a relative low capacity for planning, and there are few, if any, local leaders or residents with experience applying megaregional concepts to local decision making. "We deal with these issues and we don't have the resources that other cities do to go through a process and develop a policy or plan for these things or to think about them at a more sophisticated level," says Iliff. "But the Texas Triangle megaregion, the Texas growth rate, and these other

things that are part of us and not that far away from us are influencing us and kind of demanding that we become more sophisticated and complicated and controlled in order to plan for the city of five or 10 years from now with the tools we have today."

Key Takeaways for Practice

The experience of the Puget Sound Regional Council and the North Central Texas Council of Governments and the case study communities within these regions offer important insights into how MPOs are recognizing important linkages that extend beyond their borders and why they are finding it challenging to take action at the megaregional scale, as well as why local planning entities are not actively incorporating the megaregional concept into their planning efforts and what they see as barriers to taking action on megaregional issues.

While regional and local entities are aware of the megaregional concept and of their location within megaregions, issues of megaregional governance and ownership over megaregional issues can create barriers to interregional collaboration and action. Regional and local entities may seek competitive advantages within their megaregions; however, the full range of issues that these entities are working on regularly may prevent them from adding megaregional issues to their agendas, particularly without a clear governance structure in place. And, while it can be difficult to look beyond local or regional boundaries, there is an increasing degree of interregional collaboration around issues of transportation, air and water quality, and resilience—those large-scale issues that cross jurisdictional borders.

Governance/ownership

The lack of a formal governance structure for addressing megaregional issues or challenges can pose a barrier to action. It can also create issues of ownership—no single entity has a clear authority to take the lead on these issues. When there is no clear governance structure or ownership, it also creates challenges related recognition for the outcomes or results of megaregional initiatives, which can lead to further inertia.

Competitive Advantages

Local and regional entities are aware of the concept of megaregions and of their position within defined megaregions. Within their megaregions, local and regional entities may address the concept by working to gain a competitive economic advantage within the megaregion.

Full plates

Each local and regional entity has a number of issues to work on. These include both those issues that fall within their mandates, as well as issues that are defined by their planning constituencies. As local and regional planning entities prioritize, it can be difficult for megaregional issues to rise to the top, and a lack of direct control or ownership over megaregional issues may further disincentive a focus on the megaregional scale.

Regional Structure

A strong regional planning framework, such as the one described in the PSRC example, encourages collaboration within the region. However, by adding additional requirements for local entities to address in their planning work and by defining a scale that is broader than local but narrower than interregional or megaregional, these frameworks may deter local entities from looking beyond the defined region.

Environmental Stewardship

Regional planning entities and local governments within megaregions are coming together around issues related to air and water quality and resiliency. These are issues that lend themselves to collaborative efforts. Actions taken in one jurisdiction can have impacts that extend beyond its boundaries and, as a result, collaborative efforts can have broader benefits. However, the ownership and governance issues discussed above may preclude more collaboration in these areas.

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Appendix A. Survey of Peripheral Jurisdictions Within the PSRC and NCTCOG Regions

The American Planning Association (APA) and the Georgia Tech Center for Quality Growth and Regional Development (CQGRD) are conducting case study research in two select regions to determine if and how MPOs and select local governments within those regions are using the concept of megaregions in their long-range planning activities. As one component of this research, APA and CQGRD are surveying MPO and local planning staff to better understand how specific megaregional issues are affecting regional and local plans. Your answers will provide us with a baseline for our analysis.

Do you think of your jurisdiction (i.e., city or MPO) as being part of a larger megaregion?

To what extent have the following issues affected your jurisdiction's (i.e., city or MPO) planning processes?

- Interregional high-speed passenger rail: Most high-speed rail proposals are megaregional in scale.
- Interregional transportation connections to job centers: Some commute-sheds are interregional, meaning a relatively high percentage of people live in one region but work in another.
- Interregional trails/bikeways: Some trail systems/bikeways are interregional/megaregional in scale or cross MPO jurisdictional boundaries.
- Interregional hazard mitigation/climate change adaptation: Some extreme weather/natural disasters are interregional/megaregional in scale (e.g., the California drought or Superstorm Sandy).
- Interregional water resource management: Water resources do not respect MPO jurisdictional boundaries. Watersheds often cross MPO jurisdictional boundaries, and water use or pollution in one region may affect water supply or quality in others downstream.
- Interregional green infrastructure features or networks: The multiple benefits of contiguous green infrastructure networks increase as the size of the network increases. And in fact, green infrastructure features, such as forests, prairies, or meadowlands, as well as networks, often cross MPO jurisdictional boundaries.
- Interregional economies: Economic activity does not respect MPO jurisdictional boundaries. People may live and work in different regions, and people/firms may purchase goods and services in and from multiple regions. Different localities and regions often have different niches within interregional/megaregional economies.
- Interregional freight: Freight infrastructure and traffic is interregional/megaregional/national in scale. To what extent has this affected your local planning processes?
- Interregional utility infrastructure: Utility (e.g., energy and telecommunications) infrastructure and service delivery areas seldom correspond to MPO jurisdictional boundaries.
- Interregional environmental justice: Some infrastructure and facilities have interregional/megaregional benefits but extremely local negative environmental effects (e.g., extractive industries, waste transfer facilities, or intermodal freight facilities).
- Interregional access to affordable housing: Affordable housing is not equitably distributed between neighboring regions.
- Interregional access to affordable/convenient/safe transportation: Transportation options are not equitably distributed between neighboring regions. To what extent has this affected your local planning processes?
- Interregional access to public facilities and services: Public facilities and services are not equitably distributed within or between neighboring regions.
- Interregional infrastructure quality: Infrastructure systems are not equitably maintained between neighboring regions. Residents in areas with poor infrastructure quality may work in a different region and purchase goods and services in and from multiple regions.
- Interregional air quality: Air pollution does not respect MPO jurisdictional boundaries. Pollution produced in one region may have negative health effects in neighboring regions.
- Interregional food security and access: Food sheds do not respect MPO jurisdictional boundaries. People consume food grown in multiple regions. Agricultural land markets are interregional/megaregional in scale.

- Interregional access to parks and recreation facilities: Access to parks and recreation facilities are important for health and well-being. People cross MPO jurisdictional boundaries to visit parks and recreation facilities.
 - 0 Very little effect
 - 1 Little effect
 - 2 Some effect
 - 3 Extensive effect
 - 4 Very extensive effect

What other specific interregional or megaregional issues, not listed above, have affected your jurisdiction's (i.e., city or MPO) planning processes? Explain.

Contact Information

- First Name
- Last Name
- Title
- Employer
- City
- State
- Telephone
- Email

APPENDIX B. PERIPHERAL JURISDICTION SURVEY RESPONSES

Answers	PSRC Peripheral Cities	NCTCOG Peripheral Cities
Yes	75.0%	90.9%
No	25.0%	9.1%
Skipped	0.0%	0.0%
No effect	25.0%	45.5%
Little effect	33.3%	9.1%
Some effect	16.7%	9.1%
Extensive effect	8.3%	0.0%
Skipped	16.7%	27.3%
No effect	8.3%	36.4%
Little effect	0.0%	9.1%
Some effect	50.0%	9.1%
Extensive effect	25.0%	18.2%
Skipped	16.7%	27.3%
No effect	8.3%	27.3%
Little effect	33.3%	36.4%
Some effect	41.7%	9.1%
Extensive effect	0.0%	0.0%
Skipped	16.7%	27.3%
No effect	0.0%	18.2%
Little effect	50.0%	45.5%
Some effect	33.3%	0.0%
Extensive effect	0.0%	9.1%
Skipped	16.7%	27.3%
No effect	0.0%	9.1%
Little effect	33.3%	18.2%
Some effect	33.3%	27.3%
Extensive effect	16.7%	18.2%
Skipped	16.7%	27.3%
No effect	8.3%	45.5%
Little effect	33.3%	18.2%
Some effect	33.3%	9.1%
Extensive effect	8.3%	0.0%
Skipped	16.7%	27.3%
No effect	0.0%	0.0%
Little effect	8.3%	18.2%
Some effect	58.3%	45.5%
		0.10/
Extensive effect	16.7%	9.1%
	No Skipped No effect Little effect Some effect Extensive effect Skipped No effect Little effect Some effect Extensive effect Some effect Extensive effect Skipped No effect Little effect Some effect Extensive effect Some effect Extensive effect Skipped No effect Little effect Some effect Extensive effect Extensive effect Some effect Extensive effect Extensive effect Skipped No effect Little effect Some effect Extensive effect Skipped No effect Extensive effect Skipped No effect Little effect Some effect Extensive effect Skipped No effect Little effect Some effect Extensive effect	Answers Peripheral Cities Yes 75.0% No 25.0% Skipped 0.0% No effect 25.0% Little effect 33.3% Some effect 8.3% Skipped 16.7% No effect 8.3% Little effect 0.0% Some effect 25.0% Skipped 16.7% No effect 33.3% Some effect 41.7% Extensive effect 0.0% Skipped 16.7% No effect 0.0% Little effect 50.0% Some effect 33.3% Extensive effect 0.0% Skipped 16.7% No effect 0.0% Little effect 33.3% Extensive effect 16.7% No effect 33.3% Extensive effect 33.3% Extensive effect 33.3% Extensive effect 33.3% Extensive effect 33.3%

APPENDIX B. PERIPHERAL JURISDICTION SURVEY RESPONSES

Prompt	Answers	PSRC Peripheral Cities	NCTCOG Peripheral Cities
Interregional freight	No effect	0.0%	18.2%
	Little effect	8.3%	27.3%
	Some effect	50.0%	27.3%
	Extensive effect	25.0%	0.0%
	Skipped	16.7%	27.3%
	No effect	8.3%	18.2%
	Little effect	50.0%	18.2%
Interregional utility infrastructure	Some effect	25.0%	9.1%
	Extensive effect	0.0%	27.3%
	Skipped	16.7%	27.3%
	No effect	25.0%	27.3%
	Little effect	41.7%	36.4%
Interregional environmental justice	Some effect	8.3%	9.1%
	Extensive effect	8.3%	0.0%
	Skipped	16.7%	27.3%
	No effect	8.3%	36.4%
	Little effect	41.7%	27.3%
Interregional access to affordable housing	Some effect	33.3%	0.0%
	Extensive effect	0.0%	9.1%
	Skipped	16.7%	27.3%
	No effect	0.0%	27.3%
	Little effect	16.7%	27.3%
Interregional access to affordable / convenient / safe transportation	Some effect	41.7%	18.2%
	Extensive effect	25.0%	0.0%
	Skipped	16.7%	27.3%
Interregional access to public facilities and services	No effect	8.3%	18.2%
	Little effect	41.7%	45.5%
	Some effect	33.3%	9.1%
	Extensive effect	0.0%	0.0%
	Skipped	16.7%	27.3%
Interregional infrastructure quality	No effect	16.7%	18.2%
	Little effect	33.3%	27.3%
	Some effect	25.0%	27.3%
	Extensive effect	8.3%	0.0%
	Skipped	16.7%	27.3%

APPENDIX B. PERIPHERAL JURISDICTION SURVEY RESPONSES

Prompt	Answers	PSRC Peripheral Cities	NCTCOG Peripheral Cities
Interregional air quality	No effect	25.0%	18.2%
	Little effect	25.0%	27.3%
	Some effect	33.3%	27.3%
	Extensive effect	0.0%	0.0%
	Skipped	16.7%	27.3%
Interregional food security and access	No effect	16.7%	36.4%
	Little effect	50.0%	27.3%
	Some effect	16.7%	9.1%
	Extensive effect	0.0%	0.0%
	Skipped	16.7%	27.3%
Interregional access to parks and recreation facilities	No effect	8.3%	18.2%
	Little effect	16.7%	9.1%
	Some effect	58.3%	45.5%
	Extensive effect	0.0%	0.0%
	Skipped	16.7%	27.3%

Do you think of your jurisdiction (i.e., city or MPO) as being part of a larger megaregion? If "yes," how would you define your megaregion and its borders?

PSRC

- Central Puget Sound—Seattle/Bellevue region, aka more specifically the four counties of King, Snohomish, Pierce, and Kitsap)—or sometimes even a larger area, i.e., "Cascadia," including Washington, Oregon, and western British Columbia)
- Puget Sound
- The City of Arlington is the second largest Manufacturing Industrial Center (employer) in Snohomish County, second to the Boeing Company. We are currently in the process of receiving our Manufacturing-Industrial Center (MIC) designation from Puget Sound Regional Council (PSRC). Snohomish County would be the regional border.
- Puget Sound Regional Council—Cascadia
- Puget Sound area, Snohomish County, King County, Kitsap County, Pierce County plus Thurston County, which is outside of the PSRC MPO. Could include Skagit County and Whatcom County. If you include Portland with the Puget Sound region, you have to also include Vancouver, British Columbia.
- I see the city as part of the Puget Sound region. Its borders would be defined as counties that border the Puget Sound.
- The City of Poulsbo is located in Kitsap County, which is part of the Puget Sound Region in Washington State. The Puget Sound Regional Council is responsible for regional transportation and land-use planning in the region. The Puget Sound Regional Council consists of four counties: King, Snohomish, Pierce, and Kitsap.

West side of the Cascade Mountain Range

NCTCOG

- DFW is the MSA Frisco is a part of and consists of counties: Collin, Dallas, Delta, Denton, Ellis, Hunt, Johnson, Kaufman, Parker, Rockwall, Tarrant and Wise.
- An interconnected area, both in terms of transportation and inter-local government cooperation with the area being defined by a Council of Governments.
- North Central Texas
- As within the Dallas region
- Collin County
- We are in the northern portion of the Dallas-Fort Worth area
- We are part of the Texas Triangle
- The DFW area NCTCOG region

What other specific interregional or megaregional issues, not listed above, have affected your jurisdiction's (i.e., city or MPO) planning processes? Explain.

PSRC

- Regional planning for growth—both population and jobs, as well as cooperation among local governments and agencies. For example, we work as part of a regional effort under our state's growth management act.
- The extensive effect is the lack of these services extending and or being available in our region. Transportation impacts and the lack of rail or other mass transit amenities does not exist in our region north of the greater Seattle area. Traffic congestion and impacts will continue to be burdensome to our region.
- Higher education in our city is a very important issue. We deal with this on a statewide basis.

NCTCOG

- No other specific issues are affecting the Frisco jurisdiction.
- We mostly look at how things relate WITHIN our "megaregion." We look very little at how what we do relates to other megaregions. We may look more at that in the future.