

**GOVERNANCE FOR THE MEGAREGION  
OF NORTHERN CALIFORNIA**

**A FRAMEWORK FOR ACTION**

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Draft for discussion and  
Presentation at the Association of Collegiate Schools of Planning,  
Crystal City VA, October 1-4 2009

August 20, 2009<sup>1</sup>

## **Challenges for a Megaregion**

Metropolitan areas across the nation are increasingly growing together into megaregions with many linkages and interdependencies in their economies, their infrastructure, and their natural resources.<sup>2</sup> They are not linked well in terms of governance, however. Hundreds of jurisdictions, federal and state sectoral agencies, and regulatory bodies make independent and conflicting decisions. The result is a complex system without a government or public agency that focuses on the metropolitan region's overall welfare much less on that of a megaregion. Instead the policy decisions of one agency or jurisdiction often push their problems onto others. In addition a myriad of public and private players whose actions have large and small impacts on the region have no incentive to work together to address shared problems. The result is a region that is unable to adapt to changing conditions in a productive way and unable to be resilient in the face of stressors.

## **Purpose and Outline of the Paper**

This paper offers a framework for how the northern California megaregion can be resilient and address its challenges in a more coordinated and effective way. We begin by exploring the nature of this region and its challenges. We move on to talk about experiments in regional government and the potential for new forms of governance. Then we offer our framework, which draws on the emerging theories of complexity science to offer principles for the design of a governance system that can match the complexity and changing nature of a megaregion. To illustrate models that can be used, we offer several examples of California projects which succeeded in introducing some degree of adaptiveness. We assess some of the tools and proposals currently on the table in the state in terms of their potential in this regard. Finally we offer principles that we believe should be followed in future efforts to create a system of governance for the megaregion.

## **A Complex Megaregion**

The Northern California megaregion stretching more than 100 miles from the Pacific Ocean to the Sierra Nevada foothills is deeply interconnected in many dimensions. People who live in San Francisco head to Lake Tahoe for recreation and second homes. Water flows from the Sierra through the California Delta and on to San Francisco Bay, while water agencies along the way tap into the system for homes, agriculture, and business. Sacramento absorbs spillover high technology business and industry from crowded and expensive Silicon Valley. People commute from the Central Valley to the Bay Area because housing is more affordable in Tracy, Stockton, and Modesto. Amtrak's Capital Corridor line stretches from San Jose to the Sierra Foothills, running nearly three dozen heavily used trains a day as people seek relief from some of the most congested freeways in the state. Air pollution from Bay Area freeways makes its way to the Central Valley, blown by steady westerly winds. These are but a sample of the economic, social, and resource linkages in this far flung megaregion.

The subregions like San Jose/Silicon Valley, Sacramento and its suburbs, or San Francisco/Oakland are even more densely linked internally in economic, environmental, and social terms. Population clusters in relation to infrastructure and housing type and quality, producing a patchwork of socioeconomic and ethnic enclaves, within which job opportunities, transit access and environmental quality can vary widely. Location decisions about major projects such as large scale housing developments, highway and transit improvement projects, or shopping centers can have wide reverberations throughout a region, changing the relative well being of residents in different areas and altering their opportunity structure. Revenue raising capacity varies around a region, and, with it, the capacity to provide for needs.

By contrast the megaregion has few linkages in terms of governance or planning. Government decisions are made at many scales, typically without consultation with those who will be affected, usually without coordination or any effort to achieve joint gain among those with a stake in the issue. Federal and state agencies typically follow narrow mandates to regulate a single resource such as water, while perhaps harming another, such as agriculture. They operate in bureaucratic style, following standard procedures rather than adapting to unique circumstances. Moreover there is rarely a forum where federal and state agencies can work through a joint program of action. Public agencies often operate at cross purposes, as for example when wildlife agencies act to protect fisheries, while other agencies export the water that would otherwise protect their habitat. At the same time hundreds of jurisdictions jealously guard prerogatives around land use and development. Dozens of special district governments also make independent decisions about transit, water management, and parks. This situation is complicated by the many ways that decisions of private players including businesses, nonprofits, environmental groups, and civic organizations also affect the region's welfare. Objectives like addressing climate change, implementing smart growth, or managing the Delta's waters to accommodate competing needs cannot be accomplished under current institutional arrangements. In a globalized megaregion such as Northern California, however, international competitiveness is dependent not only on having a well networked set of relationships among economic players, but also on an efficient and adequate regional physical and social infrastructure to support innovation and just in time production.

### **Regional Governance: The Experience**

Throughout North America, Europe, and beyond similar situations prevail (Stephens and Wickstrom 2002). Nowhere has there been a lasting broad-purpose regional or metropolitan government that could deal with these kinds of issues. Experiments like those in Miami (Stowers 1996) and the Twin Cities only address limited objectives. Toronto's efforts to regionalize have been subjected to alternating waves of support, resistance, and reorganization over a 50-year period (Friskin 2001). The Greater London Council lasted for 20 years until it was dismantled by the conservative Thatcher government for political reasons. The most noted U.S. effort, Metro in Portland, Oregon, has succeeded to a considerable degree in managing growth patterns, creating or maintaining mixed use neighborhoods, and implementing transit oriented development (Abbott 1997), but this model has not proven transferable. It grew out of a unique set of conditions at a particular moment in Oregon, when there was momentum and political support for growth management. The comparative homogeneity of the population and the small size of Portland made building this metro government feasible in a way that it would probably not be in

the diverse metropolitan regions of Northern California. Indeed four attempts since the 1970s to set up regional government for the Bay Area have failed (Jones and Rothblatt 1993).

The history of the last 50 years amply demonstrates that regional leaders in Western countries believe that some type of metropolitan/regional governance is needed. But efforts to set up or maintain such governments have repeatedly foundered on the shoals of urban/suburban rivalries, partisan politics, and internecine fiscal competition (Friskin 2001; Herrschel and Newman 2002; Salet 2003). Councils of Government in the U.S. are notoriously weak and unable to take strong positions that might be seen as harming any of their members (Jones and Rothblatt 1993). In the meantime sectoral agencies, like the Metropolitan Transportation Commission in the Bay Area and Regional Air Quality Districts, operate largely in within their limited mandates, collaborating little with the local governments that make the land use decisions that interact with the agencies' investment and regulatory decisions. Not only is no one in charge, but no one has the welfare of the megaregion, or even of the subregions, as a responsibility.

### **Moving from Government to Governance**

This history and experience around the country leads to the conclusion that regional government is not an option as a practical political matter in Northern California. In any case traditional government in the U.S. is designed for stability, control, and consistency rather than to be nimble and adaptive to changing conditions. According to public management expert Donald Kettl, "The current conduct of American government is a poor match for the problems it must solve" (Kettl 2005 p. 4). Many public organizations today face a quandary in that they have responsibility for multifaceted, non-routine problems but lack the authority or capability to achieve desired outcomes (Kettl 2000). Conflicts are often addressed through judicial decision making and adversarial politics virtually ensuring winner-takes-all outcomes and continuing conflict.

Thus the future will require more than just government. It will take a *system of governance*, involving not only government, but also the involvement of many players across the gaps between agencies and jurisdictions. It will require self organization, the building of linkages and development of capacity of many agencies and actors in both formal and informal ways (Innes and Booher 2003). It will take collaboration, innovation, and determination. It will entail new roles for politicians and agency heads in setting direction, developing tasks, encouraging networks and collaboration, and rewarding creative ways of addressing problems. We live in a shared power world in which leadership has to take new forms (Bryson and Crosby 1992). There is no model out there, however--no packaged solution that California can adopt. California will have to forge its own way, relying on its emerging experience and that of other regions. Whatever is done must be tailor made to the unique characteristics of the megaregion, building on its strengths as well as addressing its particular challenges. There are signs of hope, however, because a wide variety of regional planning, coordination, and governance efforts are underway across the state and elsewhere. Some are voluntary projects of civic leaders. Some are formal or informal cooperative arrangements across agencies or jurisdictions. Efforts typically rely on networks through which information and power flows in informal ways. Collaborative processes established to address one or more issues may serve as nodes in these networks from which collective energy and innovations emerge.

## **Our Framework: Using Complexity Science Ideas to Promote Resilience**

We come to our task with the aid of insights from the field of complexity science (Innes and Booher 1999). This field has emerged from the work of computer scientists, mathematicians, physicists, and others who have observed complex, nonlinear systems over time through simulations (Gleick 1987; Waldrop 1992). These efforts are forming a paradigm for understanding of the world that differs from the machine image where a policy intervention can be designed to “fix” a particular problem. Instead in the complexity view, the effect of even a small intervention can be both unpredictable and far reaching. Complex systems, including megaregions, are subject to constant perturbations and appear chaotic, but they do exhibit patterns. In particular some complex systems are more resilient than others in that they can undergo change and still retain their functional and structural integrity rather than collapse. Moreover a resilient system is capable of self organization as its components adjust to new conditions. Such a system can build its capacity for learning and adaptation (Berkes et al. 2003). This idea of resilience is well understood in ecological and natural systems, and we believe it is an important concept to bring into human and social systems to help us move toward sustainability.

For a region to be adaptive and resilient, it needs a governance system that is flexible, experimenting, and learning. It needs to be able to respond in a timely way and to innovate if the situation demands it. It needs to be well networked so that information flows quickly through it and feedback from actions is prompt. It needs to be populated by many players with shared understandings. The regional system is too complex and far flung for anyone to comprehend it all, and its nonlinear complexity makes it impossible for anyone to predict, much less control, the system. It is necessary to rely on many players, acting on the basis of their own knowledge of their immediate environment and with the purpose of meeting their own interests, to keep the system working, learning and improving its capacity to address stressors productively.

Axelrod and Cohen (2000) have laid out a framework to make a human complex system adaptive, drawing on complexity science. We apply this to illustrate how our case examples can contribute to adaptiveness and resilience. An adaptive system has three key features: 1) diversity in its components; 2) ample opportunity for interaction; and 3) effective methods for selection of appropriate actions. Thus a resilient governance system needs many types of agents, operating with many different perspectives, knowledges, and interests. It needs to engage in many types of activities and to experiment. It needs to engage multiple agencies at all scales from federal to local. It needs to incorporate business, environmental, and social equity players as well as citizens of differing ethnicity, social and economic status, and locale. It also needs knowledgeable local players and experts from many fields. This diversity is crucial both to assure that a wide variety of information is at work and to assure that there will be many options and many players with different capabilities to take a variety of actions.

Second, the system needs ample face to face interaction among its agents so they can be informed about one another’s activities, can learn from these, and can make more informed choices about their own actions. The face to face aspect assures the building of social capital and the development of shared understanding. It can create transformations in beliefs and perspectives. The agents need to be networked among themselves to share and discuss information and experiments, to develop some common understandings, and to adapt their

activities on short notice as events and information demand. In the context of the megaregion, these interactions need to cross sectors, scales, and jurisdictional boundaries, as well as public and private sectors. This interaction needs to be collaborative to assure that listening and learning take place. Some of the ways these interactions can occur include citizen workshops, interagency collaborations, stakeholder-based collaborative dialogues, various types of partner relationships among public agencies and nonprofits, and through networks. These interactions cannot be orchestrated in detail from a central authority if this is to be an adaptive system. They have to be self organizing and evolving like the larger system itself.

Finally, governance systems need informed and effective selection mechanisms. Complexity science tells us that for a system to be productively adaptive there must be a way to eliminate ineffective strategies and agents and to promote those with more valued outcomes. In nature, individual organisms or even entire species may die off if they use unproductive strategies and cannot adapt to the changing environment. If it is a system characterized by high biodiversity, then others can replace these and the dynamics can change. The system takes new shape, but it remains living and evolving. By the same token, in a megaregion some practices catch on as players learn about them from one another. Others may fail to thrive as the first few efforts do not seem productive. Unfortunately government often interferes with the natural selection process, as it continues to fund approaches that are ineffective or because powerful politicians want them. It can also fail to support potentially promising practices for fear of failure. A fluid governance system can allow experimentation and innovation to occur before programs are legislatively designed and institutionalized. The informality of the system makes it easier to drop failed efforts. Work is needed to invent multiple evaluation processes, feedback systems, performance measures, and selection methods.

## **Examples of Adaptive Governance Practice**

Existing ways of doing things in government are typically firmly entrenched, so change toward a more fluid and adaptive governance system will only occur slowly and incrementally. But that change is occurring today, albeit in a piecemeal way outside and alongside traditional government activities. In the following section we will explore examples of some emergent practices and governance experiments that we can draw on to identify tools for building an adaptive governance system. These are centered in dialogue and interaction, diverse in participants, and to varying degrees innovative. In addition all have built networks which have expanded and grown over the years. Four are California based, one is from the U.S East Coast and another from Belgium. Many others could be identified but these offer a good variety of approaches for our purposes.

The first two examples involve water resource management, the arena where adaptive governance is most advanced in California. Water in the megaregion is the quintessential example of the complexity described in our introduction. Until the late 1980s water management was in total paralysis, with none of the many interests satisfied and no potential for traditional policy making processes to change the situation (Innes et al. 2006). Agencies and interests were working at cross purposes, bringing lawsuits against one another and overusing water in the face of drought conditions because they had entitlements. There was no forum or opportunity for players to understand their joint interest in the water, much less to cooperate to best satisfy collective needs or to deal in a timely way with stressors such as droughts. When a series of

court decisions required that more water be released into the Delta to protect endangered fisheries, it became clear that business as usual would no longer work. Some water users would have to accept less water and long accepted water rights were in jeopardy, but it was unclear how this would be worked out. Since that time a series of formal and informal collaborative efforts have taken place, each one building on the learning, social capital, and networks created by the previous efforts. We start with two of these.

### **The Sacramento Area Water Forum: Stakeholder Based Collaboration**

Sacramento Area Water Forum is an outstanding example of a long term stakeholder based collaborative process that has provided a system of adaptive governance for the waters of the Lower American River (Connick 2006, Innes & Booher 2010). It was created in the early 1990s in a region with a long history of conflict and legal wrangling. Sacramento County was fighting the expansion of the City of Sacramento's water treatment plant. The East Bay's water district, EBMUD, was trying to get its entitlement of water, but was stymied by a court decision requiring minimum flows before they could take water. Environmentalists were fighting water districts trying to develop new water supplies, and prominent politicians were demanding construction of the Auburn Dam in the face of determined opposition. It was a classic case of stalemate, with competing powers and rights, and everyone in conflict with one another. It was complex system, but not an adaptive or resilient one, and conditions were deteriorating for all players.

Water Forum produced in 2001 a formal and far reaching agreement among these competing players and had some remarkable outcomes, not the least of which was an ongoing "Successor Effort" designed to oversee implementation (Connick and Innes 2003). The stakeholders had learned that the issues were complex and the results of proposed interventions might not be as predicted, so they established this continuing stakeholder group to get feedback and adapt their actions as needed in the future. This process engaged public agency decision makers and stakeholders representing diverse interests and knowledge both in a large oversight group and in many task groups. It was initiated jointly and funded by the City of Sacramento and the County. It was managed and intensively facilitated by the Center for Collaborative Policy in cooperation with city and county staff.

Professional staffing and process management were crucial in this case. The managers made sure that the full range of interests was represented at the table to assure both that a range of knowledge was available and that collective buy in could occur. Facilitator Susan Sherry made sure that participants understood their interdependence and how reciprocity among their interests could result in options that would meet a wide range of concerns. The reciprocity held the group together and, more importantly, kept them searching for new strategies. Moreover it created the conditions for sharing knowledge and getting feedback from the system. It also created conditions for cooperation across agencies, jurisdictions, and interests. This intensive dialogue and search for productive strategies was a learning process for the key players, and it improved their capacity to respond to internal and external threats as they came up. Finally the process had ample trusted technical support in the form of consultants chosen by the group, who provided analyses of water flows, fish populations, and much more. This support was crucial to reaching agreement and to building a shared information base for action.

### **CALFED: Informality as a Governance Strategy**

CALFED, the statewide water policy and management effort from 1994 to 2003, is the most prominent example of adaptive governance thus far in California.<sup>3</sup> It was a collaborative process involving both state and federal agencies, which came to agree on directions and joint or coordinated activities. The issues and problems paralleled those facing the Water Forum, though they extended over most of the state and bitter conflicts dated back a century. CALFED has had outcomes which have built adaptive capacity that persists into the present. These were possible in considerable part because it operated informally and had strong support at the highest level from the state and the U.S. Department of the Interior. Setting up a formal system with obligations and activities laid out in advance would not have been feasible because of the autonomy of state and federal governments and the fact that no body existed with the authority to do this. CALFED's degree of success is also due in part to its reliance on working groups with expertise and representation of key interests to develop many of the ideas and practices. These not only created practices that had buy in, but also created networks of knowledgeable players linked to another and to the public agencies. The intellectual and social capital of these players has allowed them to continue working together on many of California's water problems, even as CALFED has become less active.

CALFED was set up by a Memorandum of Understanding, which spelled out only general objectives and agreement to work together. It was not legally binding on any agency. This happened because in 1994 it was clear to both agencies and stakeholders that they had reached a stalemate around water management. Agencies could not fulfill their conflicting mandates, and stakeholder interests were not being met. CALFED was a voluntary effort which at the time offered more hope than the status quo. Agency directors formed into a Policy Group, which met for staff reports on the issues and conducted private and informal conversations among themselves, building mutual understanding, shared knowledge, and social capital in the process of setting direction and agreeing on policy. A management group of deputy directors then met to work through how to implement the emerging ideas.

In 2000, as the change in presidential administration loomed, the Policy Group decided to memorialize the agreements reached in the hope these would not be undone. They had no authority to create a plan, and there was no one to adopt it in any case, so they decided to tack on to the required Environmental Impact Assessment (EIA) something they called a Record of Decision (ROD). This was their road map for working together and a record of agreements they had reached and targets for the future. A record of decision is something that is often part of an EIA, but it refers to a judge's review of the document. The choice of the concept of the ROD to substitute for the idea of a plan allowed the ROD to have some legal standing, as the State Water Resources Control Board and the Resource Secretary would formally approve it. This was an example of how CALFED did a balancing act between the formal and informal. Using the ROD concept meant that CALFED could define and shape it the way that made sense in the context of their work. It was widely regarded as their plan, but in reality it was more of a punctuation mark in an ongoing process.

CALFED relied considerably on small diverse task groups involving both agency staff and stakeholders and supported by technical expertise. Not all these were successful because some were poorly run or lacked the full mix of perspectives, but some offer remarkable success stories in adaptive management and governance. The most important example is in the cluster of working groups around water operations in the California Delta. A vast infrastructure of dams, gates, and channels throughout the region that have to be operated to respond to changes in

weather, in the health of multiple fisheries, and in the needs of California agriculture and growing urban areas. Prior to CALFED, water and fish agencies would make unilateral decisions and they would then hear comments and perhaps confront lawsuits. It could take six months or more to institute a new rule. By that time conditions in the Delta would have changed. CALFED set up a high level Operations Group (Ops) of diverse agency staff to consider conditions and make decisions about operations. It also established two mixed stakeholder/agency teams, one for data analysis focusing on modeling and forecasting flows and fishery conditions and one to gather real time information around the state. This latter group sometimes met on a few hours notice over the Internet to share information about the levels of streams or of fish kills. These representatives would listen to one another, deliberate, and make an operations proposal they all felt was in the best interest of the Delta. They passed this advice up to the Ops group to make the final decision about action. This process was accepted and relied on by the Policy Group. Thus CALFED was able to do nearly real time, informed response to changes in conditions.

Another innovation that emerged from these groups was the Environmental Water Account (EWA), a water banking system that would allow more flexibility in water usage. Farmers needed water at certain times, just as fisheries needed water releases at other times. Court decisions meant that the fishery needs would take precedence. Faced with a seeming impasse a new group formed (in this informal system groups could start spontaneously and be disbanded according to conditions and new learning). It developed this concept, cobbled in part from ideas in other water basins. EWA would start with a substantial amount of water paid for by the state, and then water users could borrow from or provide water to the account for impact mitigation, and water could be released when needed for the fish or farms. The operation required extensive data gathering and modeling, some of which was done in an open collaborative way in day long public workshops. These workshops built substantial shared knowledge, improved the data base as well as the modeling strategies, and improved forecasts. It also built trust and social capital across varied players. The EWA has foundered on unrealistic expectations that it could somehow create more water and on the reality that the additional necessary funding stream was not forthcoming. Still it continues to play a role in making California water operations more resilient.

After 2000, however, CALFED's funding began to run short, and its high level leadership disappeared with new state and federal administrations. Moreover the Delta smelt, an important indicator fish, for reasons no one understood, went into precipitous decline, along with the overall food web in the Delta. Legislators complained that there was "no one in charge" and decided the solution was to set up a Bay Delta Authority (CBDA) in 2003, which quickly supplanted the Policy Group. Essentially this effort to formalize authority undermined the informal, collaborative, and adaptive strengths of the governance process. Some agencies continued to collaborate, but many went back to old ways, ending joint grant making and no longer consulting among themselves. The most egregious example of the problem occurred when the U.S. Bureau of Reclamation unilaterally decided to increase water exports, despite problems with Delta smelt, even resorting to pressuring NOAA scientists to gloss over the likely impact of this decision. CBDA was angry that it had not been informed nor given any say in this decision, but it had no authority to stop the action. The collaborative Policy Group at least had moral authority and peer pressure, but CBDA had neither. This ill considered formalization of a working informal governance system was soon evident. A couple of years later CBDA ceased meeting and many of the CALFED activities were placed in the California Resources Agency.

### **Collaborative Regional Initiatives (CRIs): Civic Leaders Filling Governance Gaps**

Civic organizations alone or linked together offer great potential for building regional capacity and resilience. The most prominent examples in California are CRIs, which are voluntary network organizations of civic leaders which came into being over the last 15 years to help fill perceived gaps in the work of government in a wide variety of issues.<sup>4</sup> They were often led by business organizations and environmental interests, sometimes including also social equity or labor interests. Each was self organized and designed to work in the conditions, needs, and strengths of a particular region. They were largely funded by foundations, which pushed them to a focus on sustainability and the three E's (economy, environment, equity), and they involved the features that we have posited as necessary for resilience. The CRIs were all collaborative; they included diverse players; they involved dialogue and interaction among the players, and they mostly had methods for getting feedback on what they were doing and making adaptations or eliminating things that were not working. They built social, intellectual, and political capital, not only within the core leadership group but also beyond into the working groups and communities. The participants learned about the issues, and each other's interests, and developed commitments to improving their regions. They also developed more diverse networks, allowing them to act cooperatively, even beyond the CRI agenda (Innes and Rongerude 2006).

Joint Venture: Silicon Valley (JV:SV) for example was established in response to an economic downturn in Silicon Valley by high technology business leaders who soon reached out to government, education, and community leaders (Saxenian and Chinoy Dabby 2004). They were led by a widely respected former state senator, Becky Morgan, and accordingly had considerable visibility. JV:SV's strategy for creating a resilient region began with a scan of conditions, producing an annual indicator report on the state of the region (Joint Venture: Silicon Valley Network and Silicon Valley Community Foundation 2008). Then many ideas were sought from staff, the community, and the board members on activities that could address these issues, including infrastructure needs, education, and ways to support new business growth. If a group could be put together to address a topic, it received seed funding and began work. The group was on its own after that to garner additional funding. If they could not get support the project would die. This was the venture capital model, encouraging multiple innovative ideas, while allowing some to die and others to flourish if the environment gave back positive signals.

The Sierra Business Council (SBC) introduced itself into what was becoming a very nonresilient region, and it set public agencies and civic leaders in new, more adaptive directions (Innes and Sandoval 2004). There had been stalemate between long time residents and businesses with their stake in a dying industrial and lumbering sector and new residents who came for the pristine environment and wanted to share the quiet life. There were increasingly bitter battles between growth interests and environmental interests, with these framed as opposites. Moreover this 400-mile long region had few connections among communities which had little sense of themselves as a region. The core idea behind this CRI, developed by MacArthur genius award winner and environmentalist, Lucy Blake, was that to bring the sides together and protect the environment, the task would be to turn businesspeople into environmentalists. Business in the Sierra, she argued, would have its greatest success if it recognized the environment as its particular asset.

Like JV:SV, SBC began with an index showing how the region was doing on the three E's, depicted as overlapping circles (Sierra Business Council 2006). They developed the topics and indicators in consultation with leaders in the region. They took the report out to well-attended workshops around the region for dialogue on its implications. Then they held workshops and conferences that demonstrated through case examples how business and the environment were connected and that linked civic leaders and government players together in a working network. This network allowed people to learn from one another's experiments and join together as needed. Finally an important contribution to the future resilience of the region was SBC's annual Sierra Leadership seminar, which intensively trained leaders in collaborative methods and networking. This modeled a new style of leadership appropriate to a complex, uncertain and constantly changing context. These leaders then took actions that in turn had reverberating consequences as they acted collaboratively in their work.

### **Blueprint Planning**

Blueprint planning is a recent development in California designed to engage civic leaders, citizens, and other stakeholders in a process of deliberation around desired growth patterns. Blueprint planning emerged in the 1990's in response to California's sprawling growth and worsening transportation problems. Based on successes of this method, since 2005 the California legislature has funded the California Regional Blueprint Planning Program.<sup>5</sup> This voluntary, competitive grant program encourages Metropolitan Planning Organizations (MPO), Councils of Government (COG), and rural Regional Transportation Planning Agencies "to conduct comprehensive scenario planning that results in consensus by regional leaders, local governments and stakeholders on a preferred growth scenario – or 'blueprint' – ...for a twenty-year (or longer) planning horizon."<sup>6</sup> Blueprint plans aim to align transportation, housing, environmental protection, economic development, and livability objectives. The Blueprint Program also creates a Blueprint Learning Network to share lessons and best practices across the state.

Blueprint practices can contribute to resilience by including more perspectives and deliberations than are ordinarily part of transportation or land use policy making and by setting in motion region wide dialogues. Moreover they can link players from many communities around a region who would not ordinarily meet in a common forum. They can scale up from the 10-person table to a region with perhaps hundreds of discussion tables. New technology can provide real time feedback on deliberations in other parts of the region. These processes have contributed to building shared understanding among community leaders and to understandings of the benefits of compact growth. Publicity, along with participation of civic leaders, can help to get buy in from cities, encouraging them to use the recommendations that emerge in their own land use planning. When the process is sponsored by the MPO, transportation investment decisions can be made to coordinate with the desired land use patterns, providing an additional incentive for local governments.

Blueprint planning as currently constituted can be a tool in creating resilience in a region, but it falls short of offering the central approach. The very concept of a blueprint is the opposite of resilient as the term means a model for guidance, or even a detailed plan or program, whereas resilience requires the ability to change and adapt as we learn from evolving events and experiments. Indeed as presently constituted it seems to dead end in a pattern of so called "smart" or compact growth. This concept is well suited to address some of our current problems

in reducing greenhouse gases and saving infrastructure resources, but it should be kept in mind that conditions may change and other strategies may suggest themselves. Smart growth may one day not be so smart.

Blueprint planning depends for implementation on powerful players like city councilors and planning commissioners who may or may not have been involved in making the plan. Even if they do come to workshops, their participation does not commit them to any course of action. In any case workshops are short term and do not involve enough engagement, information, or detailed deliberations for players to develop a full understanding of the constraints and opportunities open to them or to learn how they can collaborate among themselves for mutual gain. Ultimately Blueprint planning seems to be a form of participation in which public agencies do the framing remain the decision makers. To turn Blueprint planning into a powerful tool for resilience, it needs to link business and environmental players, deal makers and deal breakers, and social and environmental justice interests. It needs to be continuous and involve far more learning and development of mutual understanding among those with differing perspectives. It needs to involve conscious efforts to create networks and the distributed intelligence that can contribute to sustainable land use patterns.

### **National Estuary Program**

The U.S. Environmental Protection Agency's National Estuary Program (NEP) appears to be increasing the resilience of large estuaries that face problems such as degradation of water quality, habitat loss, development impacts, and altered flow regimes. Such problems are exacerbated by overlapping jurisdictions, conflicting agency mandates, competing stakeholder demands, and unpredictable social and ecological processes. Since 1987, the NEP has encouraged actors in 28 estuaries to collaborate in developing a Comprehensive Conservation Management Plan (CCMP) for prioritizing and implementing management solutions. CCMPs are developed through inclusive consensus-based processes involving local, state, and federal governments, interest groups, citizens, business leaders, educators, and researchers. As a result, CCMPs have catalyzed and strengthened estuary networks, improving the capacity of actors to cooperate to address their interdependence. This result depends in part on NEP incentives that have enabled actors to overcome costs associated with participation in time- and meeting-intensive processes like the CCMPs. This suggests an important role for government in providing incentives and building network capacity (Schneider et al. 2003).

The NEP provides monetary resources for staffing, research, and other needs; a forum for diffusion of lessons and information across estuaries in the NEP program; and a requirement for broad public participation to obtain funding. As a Congressionally-designated program, the NEP also offers statutory legitimacy that may help some actors overcome hesitance to engage in a deliberative forum such as the CCMP planning process. Through these efforts, NEP has fostered a culture of cooperation. Compared to other estuaries, NEP estuaries have networks that link more actors across more diverse interests and across more levels of government, that integrate technical and scientific experts more effectively, and that may better span ideological divides between actors such as developers and environmentalists. These linkages, along with the CCMP process that acts as a forum for face-to-face interaction for collaboration, lay the groundwork for resilience. They also increase actors' faith in the fairness of the decisions and contributes to their willingness work through problems together before resorting to lawsuits (Schneider et al. 2003). These networks may help NEP estuaries meet unfolding challenges such as adapting to rising sea

levels and monitoring emerging, poorly-understood contaminants. It should be noted that the San Francisco Estuary project in the late 1980s, an early NEP project, helped set in motion the building of the networks that have supported CALFED and the current Delta Vision process.

### **Networks in Belgian Planning**

Ghent, Belgium, offers an example of how a network approach can emerge, evolve, and grow to improve planning and governance in a fragmented and chaotic region (De Rynck and Voets 2006). The impetus for this network was recognition of discontinuities between environmental, residential, economic, and transit issues in the canal area. These issues threatened the region's livability, economic development, and ecological values. But in the confines of Belgium's traditional government paradigm, where planning was centralized, catered toward the demands of elite groups, and insensitive to interdependence, rival interests were deadlocked. In 1993, a small group of local officials and planners decided to try something new. They began an effort called the ROM project to develop a more coordinated vision for the region. ROM evolved gradually to become the "central platform for communication and deliberation concerning the canal area of Ghent" (De Rynck and Voets 2006 p. 67). The effort has achieved mutually beneficial agreements and projects, along with outcomes such as pollution reduction, industrial and buffer zones, and integrated transportation projects. Observers and participants believe these improvements would not have been possible under business-as-usual planning and politics in Ghent. ROM continues to link multiple tiers of government, the private sector, and now citizens in reconciling the region's many interconnected spatial, economic, and environmental issues.

This example shows how a network-based governance approach can improve a region's resilience. Through a process of self-organization not directed by any single actor or agency, ROM developed incrementally, based on a consensual and collaborative style. It gradually became an effective, informal governance framework for coordinating many critical interdependencies. Spending the first few years in a learning phase of exploring options and developing a common, though flexible, vision, the network later shifted to research and implementation of projects to achieve this vision. As successes grew, more actors became involved, expanding the network, its diversity, and its access to resources and decision-makers. Although each network actor works toward his or her own interest – improved transportation for industrial producers, better cycling paths for residents, solving traffic jams for the city of Ghent, etc. – the network approach has produced synergies that better address the region's interdependence than could go-it-alone approaches. This approach has pulled the system out of the chaotic state that was threatening residential value, economic prosperity, and environmental health. As in the NEP, government actors – including politicians, the provincial governor, and civil servants – have played an important role in initiating and maintaining the effort as well as "safeguard[ing] the big picture" (De Rynck and Voets 2006 p. 67).

### **Networks as the Basis of Governance for Resilience**

At its heart, governance in complex systems is about harnessing the power of networks – networks that connect people, ideas, and knowledge in changing combinations across organizations and public problems ( Sorensen and Torfing 2007). These fluid networks have emerged to address many problems where traditional structures of government have failed. Such

problems are often spatial in nature, such as integrated regional governance (Hajer 2003). The existence of interdependence, the inability of a single actor or organization to make progress on an issue alone, is a critical factor in drawing actors together to work through networks (Aldrich 1979). Although in one sense, governance networks are not new – actors concerned with solving public problems have always been linked, if loosely, across an array of institutions and organizations – the perception of increasing interdependence and complexity of society has piqued interest in how network approaches can improve the governing of society (e.g., see Kettl 2005). Networks may primarily improve information-sharing or they may serve as forums for public policy deliberation, decision-making, and implementation (Klijn and Koppenjan 2000). By connecting diverse actors around specific problems or geographic areas, networks build sensitivity to local realities that centralized government often cannot achieve (Hajer and Wagenaar 2003). They also increase coordination across many boundaries such as those between government agencies, levels of government, experts from different fields, and opposing ideological camps (Schneider et al. 2003).

It is through these capacities that governance networks can improve resilience of complex systems. Resilience grows as networks strengthen linkages in the system. These linkages facilitate the self-organization of nodes of interaction, dialogue, and collaboration to address emerging problems or crises. Networks do not get rid of conflict. Rather, by bringing together interdependent actors with different interests, perspectives, and resources, network nodes can serve as sites of creative energy for finding mutually beneficial ways to move forward (Klijn and Koppenjan 2000 p. 140). And after actors have crafted a plan, each can draw on his or her own external linkages to access and mobilize a larger range of resources and people (De Rynck and Voets 2006). Finally, as dynamic entities, networks can learn and adapt through experimentation, monitoring, and responding to feedback.

### **Tools for Resilient Governance**

These examples of emergent practices contain within them components that can be assembled in a variety of ways to create governance for resilient regions. No one component or tool is sufficient by itself; many or most of these have to exist in combination to have a resilient governance system. These tools include:

- Diversity and Interdependence. Diverse and interdependent players can be assembled to jointly do tasks in which all have a stake. Diversity provides the many faceted perspectives, and interdependence creates the opportunity for the invention of options for mutual gain, moving beyond the zero sum negotiations that typify conflicts today.
- Collaborative Dialogues. Multiway dialogues in which all are heard and respected can be established. These can not only do joint tasks and joint visioning, but they can also build social capital among previously competing parties. They can create linkages among these players, along with shared understandings of the issues. Such dialogues can allow shared purpose to emerge and can channel conflict into constructive strategy making. They can be the opportunity, not only for problem solving, but also for the development of innovative strategies to address seemingly intractable issues. Where parties are unused to such dialogue it is desirable to have professional facilitation so that such outcomes can be

achieved. Collaborative stakeholder dialogues are at the core of any effort to develop a resilient governance system. They can develop initiatives that will be supported by interests, knowledge that will be widely used, and networks that emanate into the community and link across scales and sectors. They can produce transformative learning and new framing of issues helping us move past impasses. Such dialogues can be done successfully only where multiple interests understand they cannot get their needs met going it alone, where all significant players see benefit in coming to the table, and where the participants have reciprocal or complementary interests. When these conditions do not exist they can often be created through legislation, regulation and court decisions.

- Collaborative Development of Knowledge. Collaborative development and use of knowledge is a crucial tool because no single source or type of information is adequate to encompass the many aspects of the region that must be considered. Moreover different participants see through different lenses, each of which offers valuable information. Finally such jointly developed information is essential to assuring trust among diverse players. Collaborative knowledge development can take many forms. For example, joint fact finding among scientists and scientists and staff was done in many parts of CALFED and in many other collaborations around the country. Stakeholder scientists and scientists and engineers from different disciplines meet, often with facilitation assistance, and come to agreement on what is known and not known. Sometimes experts meet with collaborative groups and discuss their findings, adjusting their assumptions, models and projections in response to input from the laypeople who best know the situation on the ground. Increasingly, too, it is important to include local knowledge and knowledge from the disadvantaged or most affected players to get a full and detailed picture.
- Networks. Networks of players can be built. They can be a natural outgrowth of collaborations or created and nurtured by public agencies to deliver services or link public and private sectors for joint tasks. They can build the capacity of the system and provide channels through which information and power can flow. Networks can make it possible to mobilize action, as they did in the Sierra and in Ghent.
- Boundary Spanning. Cross sector, cross jurisdictional, and cross scale activities are critical, as are linkages and joint activities between the public and private sector, including nonprofits. Boundary spanning activities of this sort not only allow the sharing of information and the building of understanding of differing agendas and competencies, they also create the potential for discovering mutually beneficial actions. Most of all, they enable resilience by creating flows of information that have not been available in the past and by developing shared meaning among the actors on the issues.
- Monitoring and Feedback. Resilience requires monitoring, feedback systems, and ways of responding in real time to what is learned (Innes and Booher 2000). Indicators should be developed for key changes in, for example, traffic patterns, air quality, and housing sales and foreclosures. Some indicators already exist, but others need to be developed with the cooperation of those with local knowledge. Moreover there needs to be a way of jointly analyzing these data and selecting appropriate responses.

- Small, Diverse Working Groups. Another central technique for working in a complex and uncertain context, especially one where many world views and interests conflict, is the use of small, mixed groups to work through specific tasks. This technique has been a major component in CALFED, the Water Forum, and many other effective collaborative processes. Such groups can build trust and joint learning as well as come up with feasible, often innovative proposals.

## **What Should be the State's Role?**

These governance practices reflect changing roles for federal, state, and local governments, as well as citizens, interest groups, scientists, and the private sector. Governing for resilience requires the state to play an active role, though one that differs in key respects from current practice. A focus on governance rather than government shifts the role of the state away from single-handedly developing and implementing plans and programs and instead to steering or metagovernance (Bogason and Musso 2006). Metagovernance refers to “the management of complexity and plurality” (Jessop 1998 p. 42). The state can do this by enabling and encouraging self-organization and by building capacity in a variety of ways. The public sector has access to resources – budgets, personnel, and democratic legitimacy – that are essential to creating a resilient governance system. The state can offer incentives for cooperation among players; it can create forums for dialogue around joint actions to be taken by multiple agencies and private players; and it can set targets and direction (Klijn and Koppenjan 2000).

### **Elected Officials**

Sorensen identifies four ways in which political officials can engage in metagovernance (Sorensen 2006). First, they can establish political, organizational, and financial means for action, for example by crafting laws and incentive structures that foster cooperation and learning. Creating forums for dialogue with statutory legitimacy may give hesitant actors the motivation to engage (Schneider et al. 2003). Second, politicians can articulate visions of the future and shape public perceptions of the issues and solution through story, metaphor, and imagery. This can inspire actors or reframe issues from intractable ones to manageable ones. Third, lawmakers can engage as neutral facilitators or mediators of processes. Fourth, they can engage as active participants in negotiation of collective solutions. Governance for resilience entails adaptation of the standard roles of lawmakers. They may less often prepare detailed policies and programs and more often set frameworks and mobilize players toward larger ends. In our view these new roles will ultimately give them more scope and power than does business as usual. Elected officials will continue to be the leaders, but more as visionaries, enablers and regulators of process, and decision makers of final resort than they are today. They will be the ones to establish the tasks, set the priorities, create incentive structures, and remove obstacles to cooperation.

### **Leaders of Public Agencies**

Agency leaders will need to develop skills at building organizations that can learn and work across boundaries (Wondolleck and Yaffee 2000) as they do in the private sector. The task may require changing reward structures, providing training and resources, and recruiting people with skills in community outreach and conflict management. It will include creating jobs with new responsibilities and descriptions such as network facilitators and liaisons. Leaders can also

make changes to organizational structures and processes, like budgeting, to promote cross-boundary cooperation and to build responsiveness and flexibility. For example, a new Superintendent at Yosemite National Park transformed park management to elevate community engagement and outreach to a more prominent and valued position, modeled an ethic of collaboration by engaging personally with community members, and spearheaded community-building dialogues outside of formal planning processes. These actions alleviated long-running tensions between the park and surrounding communities and built capacity for addressing emerging issues more proactively and collaboratively (Lever et al., 2008).

### **Civil Servants**

A focus on resilience shifts the role of civil servants from following rules and procedures, achieving performance targets, or developing plans to building and participating in networks that improve functioning of complex systems (Stoker 2006 p. 44). As process managers, civil servants may motivate other actors, build shared perception of problems, create organizational arrangements for collaboration, and provide conflict management assistance (Klijn and Koppenjan 2000). They identify missing stakeholders and can provide logistical and staff support to collaboration.

### **General Comments on the State Role**

A few cautions need to be offered here. First these various state roles are not always compatible (Klijn and Koppenjan 2000). For instance, a state agency tasked with environmental protection cannot be a neutral facilitator for decision-making in a project with potentially negative impacts on the environment. Second, these informal governance approaches are not a panacea. There will continue to be regional problems around growth, planning, and development that cannot be solved collaboratively and must be referred to courts or legislatures for resolution. Similarly, adaptive governance is time and resource-intensive, and many issues may not prove sufficiently critical to attract and maintain participants' commitment (Scharpf 1978). Third, the use of networks carries risks such as the emergence of groupthink, lack of transparency in decision making, insularity, and exclusion of the disempowered (Klijn and Koppenjan 2000). These are problems that the state must guard against by such methods as assuring fully diverse participation and insistence on public access to decision processes.

The critical challenge for the State of California is to help actors recognize their interdependence and to organize themselves to address key tasks in ways that are accountable to the public. Local governments for example are protective of their autonomy, particularly in land use, but in reality they have no power over other governments' land use decisions that affect their own and little power over regional infrastructure decisions that shape their options. A new, more collaborative approach mandated by the state could compensate for perceived loss of autonomy by empowering localities to influence each other's choices. What the state can do is create forums that join players across the region, as they have in the Blueprint legislation and in SB 375, with its incentives to cooperate to address smart growth and reduce greenhouse gas emissions. What state level players should not do is micromanage such forums or constrain them unduly with rules and targets. Rather they should establish the metagovernance framework and the incentives and let the players with the local power and knowledge work through the most effective strategy. The state can hold competitions for innovations in, for example, transit village design or water conservation and publicize these widely. The state should also to the extent possible revisit the

fiscal incentives and disincentives that shape actors' decision making today. While at first it may seem as if this stepping back of state officials represents a loss of control for them, that sense of control was always illusory in this complex rapidly changing environment where there are no simple fixes or standard ways to achieve goals. Instead as visionaries and designers of processes and incentives the state has a role that can represent even more power to make change happen and to create a resilient and healthy region.

## **Conclusion and Summary**

Much of Northern California has grown into a deeply interconnected megaregion with clear economic, social, and ecological linkages and interdependencies. These linkages have helped to make Northern California a center of innovation that offers its citizens unequalled opportunities and quality of life. But, like others in the state, the Northern California megaregion has also begun to show strain in the face of uncoordinated growth and increasing demands on its infrastructure and environment, problems for which traditional structures of government are often ill-equipped. People spend more time in their cars to travel shorter distances, declining air quality in the Central Valley affects human health and quality of life, and pressures on the Sacramento-San Joaquin Delta threaten its capacity to deliver water to farms and cities, to withstand floods, and to thrive ecologically. These problems and others like them are 21<sup>st</sup> century challenges, spanning the responsibilities of many actors and organizations, and which no one agency can address alone. Characterized by complexity and interdependence, such challenges share a need for innovations in governance that can inspire flexible, shared solutions. Innovative, adaptive governance links interdependent actors across jurisdictions, sectors, and organizations in fluid networks that exchange ideas and resources. It helps a system learn by experimentation and by pooling information and feedback from many diverse sources and perspectives. And it demands face-to-face interaction and productive dialogue, where creative win-win solutions can emerge. California can facilitate this type of governance by building on existing successes and experiments in California, the U.S., and Europe. These experiences show that collaboration, network-building, boundary-spanning, and monitoring and feedback are all key tools. The state can build capacity of state agencies, citizens, and others to collaborate, it can help these actors recognize their interdependence, and it can reframe issues to highlight the need for shared solutions. These innovations in governance will form a critical foundation to help California and its regions adapt and meet the challenges of the 21<sup>st</sup> century. These will not replace formal government, but coexist with it for some time, sometimes almost as a shadow system, doing things for example that local governments would not agree to if they were legally binding or that public agencies may not yet be empowered to do. The players can experiment and select what appears to work, combining ideas in various ways. They may provide innovations and ideas that elected officials may take up. They will provide new ways to get public input. In the process they will gradually change existing practices.

## **References**

Abbott, C. 1997. *The Portland Region: Where City and Suburbs Talk to Each Other and Often*

- Agree. *Housing Policy Debate* 8(1): 65-73.
- Aldrich, H. 1979. *Organizations and Environments*. Englewood Cliffs, NJ: Prentice Hall.
- Axelrod, R.M. and M.D. Cohen 2000. *Harnessing Complexity: Organizational Implications of a Scientific Frontier* New York, Basic Books.
- Berkes, F., J. Colding and C. Folke. 2003. Introduction. *Navigating Social-Ecological Systems: Building Resilience for Complexity and Change*. F. Berkes, J. Colding and C. Folke. Cambridge, Cambridge University Press: 1-29.
- Bogason, P. and J. A. Musso. 2006. The Democratic Prospects of Network Governance. *The American Review of Public Administration* 36(1): 3-18.
- Bryson, J. and B. Crosby. 1992. *Leadership for the Common Good: Tackling Public Problems in a Shared Power World* San Francisco: Jossey Bass Publishers.
- Connick, S. 2006. The Sacramento Area Water Forum: A Case Study Institute of Urban and Regional Development Working Paper 2006-06. University of California Berkeley.
- Connick, S. and J. E. Innes. 2003. Outcomes of Collaborative Water Policy Making: Applying Complexity Thinking to Evaluation. *Journal of Environmental Planning and Management*, 46(2): 177-197.
- De Rynck, F. and J. Voets. 2006. Democracy in Area-Based Policy Networks: The Case of Ghent. *The American Review of Public Administration* 36(1): 58-78.
- Dewar, M. and D. Epstein 2007 Planning for "Megaregions" in the United States. *Journal of Planning Literature* 22 (2) 108-124.
- Friskin, F. 2001. The Toronto Story: Sober Reflections on Fifty Years of Experiments with Regional Governance. *Journal of Urban Affairs* 23(5): 513.
- Gleick, J. 1987. *Chaos: The Making of a New Science*. New York: Penguin Viking.
- Hajer, M. 2003. Policy without Polity? Policy Analysis and the Institutional Void. *Policy Sciences* 36(2): 175-195.
- Hajer, M. A. and H. Wagenaar. 2003. *Deliberative Policy Analysis: Understanding Governance in the Network Society*. Cambridge: Cambridge University Press.
- Herrschel, T. and P. Newman. 2002. *Governance of Europe's City Region: Planning, Policy and Politics*. London: Routledge.
- Innes, J. 2004. Taking the Three 'E's Seriously: The Bay Area Alliance for Sustainable Communities Institute of Urban & Regional Development. IURD Working Paper Series. Paper WP-2004-07, University of California at Berkeley.  
<<http://repositories.cdlib.org/iurd/wps/WP-2004-07>.>
- Innes, J. and J. Rongerude. 2006. Collaborative Regional Initiatives: Civic Entrepreneurs Work to Fill the Governance Gap. Institute of Urban & Regional Development. IURD Working Paper Series. Paper WP-2006-04, University of California at Berkeley.  
<<http://repositories.cdlib.org/iurd/wps/WP-2006-04>.>
- Innes, J. and G. Sandoval. 2004. Turning Business People into Environmentalists: The Sierra Business Council. Institute of Urban & Regional Development. IURD Working Paper Series. Paper WP-2004-06, University of California at Berkeley.  
<<http://repositories.cdlib.org/iurd/wps/WP-2004-06>.>
- Innes, J. E. and D. E. Booher. 1999. Metropolitan Development as a Complex System: A New Approach to Sustainability. *Economic Development Quarterly* 13(2): 141-156.
- Innes, J. E. and D. E. Booher. 2000. Indicators for Sustainable Communities: A Strategy Building on Complexity Theory and Distributed Intelligence. *Planning Theory & Practice* 1(2):

- 173-186.
- Innes, J. E. and D. E. Booher. 2003. The Impact of Collaborative Planning on Governance Capacity. Institute of Urban & Regional Development. IURD Working Paper Series. Paper WP-2003-03. University of California at Berkeley. <<http://repositories.cdlib.org/iurd/wps/WP-2003-03>>
- Innes, J.E. and D.E. Booher 2010. *Planning with Complexity: An Introduction to Collaborative Rationality* Routledge/Taylor and Francis, Oxford.
- Innes, J. E., S. Connick, L. Kaplan and D. E. Booher. 2006. Collaborative Governance in the CalFed Program: Adaptive Policy Making for California Water. Institute of Urban & Regional Development. IURD Working Paper Series. Paper WP-2006-01, University of California at Berkeley. <<http://repositories.cdlib.org/iurd/wps/WP-2006-01>>
- Jessop, B. 1998. The Rise of Governance and the Risks of Failure: The Case of Economic Development. *International Social Science Journal* 50(155): 29-45.
- Joint Venture: Silicon Valley Network and Silicon Valley Community Foundation. 2008. *Index of Silicon Valley*. San Jose, CA, Joint Venture: Silicon Valley. <<http://www.jointventure.org/publicatons/index/2008Index/index.html>>
- Jones, V. and D. Rothblatt. 1993. Governance of the San Francisco Bay Area. *Metropolitan Governance: American/Canadian Intergovernmental Perspectives*. Donald N. Rothblatt and Andrew Sancton. Berkeley, Institute of Governmental Studies Press, University of California: 375-431.
- Kettl, D. F. 2000. The Transformation of Governance: Globalization, Devolution, and the Role of Government. *Public Administration Review* 60(6): 488-497.
- Kettl, D. F. 2005. The Next Government of the United States: Challenges for Performance in the 21st Century. *IBM Center for The Business of Government, Washington DC*.
- Klijn, E. H. and J. F. M. Koppenjan. 2000. Public Management and Policy Networks: Foundations of a Network Approach to Governance. *Public Management* 2(2): 135-158.
- Lever, C. C., S. B. Di Vittorio and J. K. Gilliss. 2008. Evolving Park Management: Organizational Culture Change at Yosemite National Park. Unpublished Manuscript.
- Saxenian, A. and N. Chinoy Dabby. 2004. Creating and Sustaining Regional Collaboration in Silicon Valley? The Case of Joint Venture: Silicon Valley. Institute of Urban & Regional Development. IURD Working Paper Series. Paper WP-2004-05, University of California at Berkeley. <<http://repositories.cdlib.org/iurd/wps/WP-2004-05>>
- Scharpf, F. W. 1978. *Interorganizational Policy Studies: Issues, Concepts and Perspectives*. London: Sage.
- Schneider, M., J. Scholz, M. Lubell, D. Mindruta and M. Edwardsen. 2003. Building Consensual Institutions: Networks and the National Estuary Program. *American Journal of Political Science* 47(1): 143-158.
- Sierra Business Council. 2006. Sierra Nevada Wealth Index 3rd Edition. Retrieved September 26, 2008, from <http://www.sbcouncil.org/Publications/2006-Wealth-Index>.
- Sorensen, E. 2006. Metagovernance: The Changing Role of Politicians in Processes of Democratic Governance. *The American Review of Public Administration* 36(1): 98-114.
- Sorensen, E., Torfing, J. eds. *Theories of Democratic Network Governance*. Palgrave MacMillan, Basingstoke, Hampshire. UK.
- Stephens, G. R. and N. Wickstrom. 2002. *Metropolitan Government and Governance: Theoretical Perspectives, Empirical Analysis and the Future*. Oxford: Oxford University

- Press.
- Stoker, G. 2006. Public Value Management: A New Narrative for Networked Governance? *The American Review of Public Administration* 36(1): 41-57.
- Stowers, G. 1996. Miami: Experiences in Regional Government. *Regional Politics: America in a Post-City Age*. H.V. Savitch and Ronald K Vogel. Thousand Oaks, Sage Publications: 185-205.
- Teitz, M. and E. Barbour 2007. Megaregions in California: Challenges to Planning and Policy. The Healdsburg Research Seminar on Megaregions, April 4-6. Lincoln Institute of Land Policy. [http://www.lincolninst.edu/pubs/dl/1282\\_Healdsburg.pdf](http://www.lincolninst.edu/pubs/dl/1282_Healdsburg.pdf)
- Waldrop, M. M. 1992. *Complexity: The Emerging Science at the Edge of Order and Chaos*. New York: Simon & Schuster.
- Willem Salet, A. T., and Anton Kreukels., Ed. 2003. *Metropolitan Governance and Spatial Planning : Comparative Case Studies of European City-Regions* London, Spon Press, Taylor and Francis Group.
- Wondolleck, J. M. and S. L. Yaffee. 2000. *Making Collaboration Work: Lessons from Innovation in Natural Resource Management*. Washington, D.C.: Island Press.

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<sup>1</sup> Preparation of this paper was funded by the William and Flora Hewlett Foundation through the University of California, Berkeley's Global Metropolitan Studies program. Research for original case studies was funded by the James Irvine Foundation (Sierra Business Council and Joint Venture Silicon Valley); **Error! Main Document Only.**National Science Foundation, 2001-2004 (CALFED); **Error! Main Document Only.**University of California Centers for Water and Wildland Resources, 1997-99 (Sacramento Water Forum). Other examples are grounded in secondary sources as noted.

<sup>2</sup> For background on this situation see two useful articles.(Teitz and Barbour 2007; Dewar and Epstein 2007)

<sup>3</sup> For more detail on this case see Innes and Booher 2010, Chapter 3; Innes, et al. 2006; Connick and Innes 2003.

<sup>4</sup> See <http://www.calregions.org/>.

<sup>5</sup> The original authorizing legislation was the FY 2005/06 California State Budget (Senate Bill 77). The program was reauthorized in the FY 2006/07, FY 2007/08, and FY 2008/09 State Budgets.

<sup>6</sup> Language is from the 2007-2008 Blueprint Program Grant Application Package at: [http://calblueprint.dot.ca.gov/FY\\_07-08\\_MPO\\_Blueprint\\_Grant\\_Application\\_Package-Final.doc](http://calblueprint.dot.ca.gov/FY_07-08_MPO_Blueprint_Grant_Application_Package-Final.doc).