CALIFORNIA IN THE YEAR 2000: RESOURCES AND DEMOGRAPHICS

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The future of California's natural resource systems is a topic that deserves more discussion. Our attention span on resources must reach beyond the present to include the coming decades. There are issues of transcendent importance which must be resolved if the next generation of Californians is to enjoy an adequate supply of environmental goods and services. Unfortunately, few people in the state have the time, inclination, or means to anticipate our future resource requirements.

Such lack of foresight is not limited to resources; it is a more widely shared cultural deficiency. As a rule, Californians are not prone to wrestle with the vagaries of planning, forecasting, and trend analysis. In most futuristic of states, most of us are comfortably lodged in the present. There are good reasons for this.

First, California is a very young society. Without the tradition of a collective history, looking ahead with precision is difficult and not encouraged. Second, Californians are basically a collection of individualists with close ties to the spirit, rules, and temporal dimensions of the frontier. Frontiersmen are not suppose to wax long and hard over the future of the place they are today. Third, a frontier still exists here. While we are the nation's most populous state, less than five percent of the land base is urbanized, and only about ten percent more is committed to intensive land uses such as agriculture. California still has room for growth and development. In addition, the state sits on the edge of the Pacific Rim which opens another new world of immediate possibility. Finally, California is a leader in the creation of fantasy themes, technologies, and media which quiet the need to think about tomorrow.

But some limitations are upon us, and several of these result from biological and physical constraints in our environment. Some of these limitations have been defined and are being addressed. Others await our attention.

Water has probably always been California's most constraining natural factor. In the area of water, the state has adopted something of a systematic policy. The development of the Hetch Hetchy, Los Angeles, State Water, and Central Valley projects marked an early attempt to plan for the growth needs of the state. We now see that these projects have had environmental effects, have provided subsidies to certain interests, and have contributed to increased levels of consumption. Still the state's water projects have produced benefits and their development indicates the fruits of anticipatory planning.

The Coast is another example of a limited resource which we have agreed to collectively address. By the late 1960's, concern for the Coast had pushed the state into a limited planning effort. The passage of Proposition 20 in 1972 reorganized the state's governmental power over coastal resources and created a coastal commission and a comprehensive planning process. Proposition 20 also demonstrated that the electorate could understand the need to act on environmental limitations.

In the midst of this progress, other resources have generally not been perceived as scarce. Forestlands, wildlands, rangelands, wildlife habitat, and recreation sites still command but limited popular attention. But this luxury of inattention may soon need to change. Significant challenges to meet rising demands, to mediate acrimonious debate, and to substitute for unacceptable technologies are upon us.

This is the theme of this paper. What future does California hold for resource management? And how might the professional community develop improved strategies to mediate or to create this future? These questions are addressed by exploring three topics: (1) an elaboration of the basic forces of change in the state, (2) a discussion of our traditional institutional methods for protecting and employing natural resources, and (3) a review of new tools that might be used to harness a different future.

BASIC FORCES OF CHANGE

California of tomorrow will be determined largely by demographic, economic, and political factors that have been part of the California experience for some time. For more than a century, California has experienced a population explosion of unparalleled proportion (Bradshaw 1986). In the years since statehood, the number of Californians has doubled on average every 20 years. This represents the fastest long-term population growth of any industrialized region in the world. In 1900, there were two million Californians. Today, there are nearly 27 million. Since 1957, when we passed New York, California has been the most populous state in the nation.

This breakneck pace is not projected to continue. The population is not expected to double again until after 2050. Still, population growth and ethnic diversification will remain a dominant force for change. Projections for the year 2000 indicate a population of 31 million (California Department of Finance 1987), and by 2020, 37 million. Thus, in the next 13 years, we will add four

million people, or more than currently live in the city of Los Angeles. So to accommodate them, we will have to build a residential and service complex at least equivalent to another Los Angeles. This in just 13 years.

California's population growth has been accompanied by an equally robust economic explosion. The state's economy is currently one of the most powerful in the world, producing nearly $500 billion of goods and services annually (Wells Fargo Bank 1986). This ranks California sixth among the world's economies. The state's economic growth is characterized by what economists term advanced industrial development. This means that the economy has become dominated by rapid advancements in communications and transportation technology, growth in service sector firms and jobs, and a relative decline in the importance of primary resource industries. Two groups of basic industries, high technology and diversified manufacturing, will account for 90 percent of the industrial job growth in the 1980's. California will account for fully 30 percent of all high technology jobs created nationally during the decade (Center for the Continuing Study of the California Economy 1982). In sum, California is among the leaders of an important industrial transformation that has global significance.

The transformation also has a strongly urban flavor. Cities, indeed megacities, are the center of action for high technology growth. Most Californians live in cities. The 1980 census found that over 90 percent of our citizens live in areas defined as urban. This is a pattern more like the Northeast than other Western states. People have come to California to find a dream and apparently they think this dream lies near an urban center. Urban growth is projected to continue. The vast majority of Californians of the future can be expected to live in the San Diego-Los Angeles-Riverside triangle, in the Bay Area, which will grow to include Sacramento, Salinas and Santa Rosa, or in Fresno or Bakersfield, which may also come close to merging.

The implications of all of this for resource management are multifold. First, of course, there will be tremendous new requirements for water, open space, and other goods and services. The state should have the economic might to import goods like timber and beef if we choose. But fixed resources like recreation, water and wildlife habitat will be more in demand and will become even more scarce goods.

Second, although the majority of the state's growth is around cities, rural areas are also experiencing increases in population. In fact, 10 of the 15 fastest growing counties, in relative terms, are counties in our forest and rangeland regions (California Department of Forestry and Fire Protection 1987). The implications of this rural migration are many, including higher land values, land ownership fragmentation, a checker board pattern of alternative uses, and increased political conflict over traditional management activity. Each of these trends bears on the continued viability of renewable systems.

Third, political power in the state has become dominated by urban populations. The legislative reapportionment mandated by the Supreme Court's one-person, one-vote decision contributed to this trend. In 1960, nearly half of the 40 State Senators came from rural areas, today, less than a quarter do. Natural resource issues are simply not high profile concerns with California politicians.

Finally, the dominance of an urban perspective defines social action on resource questions. This is a hard one to interpret. A 1984 Field poll indicated the dominance of an environmentalist perspective among Californians. The poll found that 27 percent of the population considers themselves to be environmentalists. Sixty-two percent believe they are somewhat environmentally oriented. Only 10 percent hold no environmental leanings at all. In response to a question on the need to balance growth with development, 27 percent favored slowed growth, 65 percent want a balance, and only 5 percent would like to see environmental protection relaxed to promote growth. These percentages hold steady across political affiliation, age, and other characteristics. Only place of residence, urban versus rural, makes a difference. Rural residents, on average, would like to seen more growth. Additionally, the Field Poll was replicated quite well by the vote in November 1986 on Proposition 65, the so-called toxics initiative.

Such strong environmental leanings are impressive but there seem to be questions as to how these preferences are translated into support for rural resource programs. Urban environmental concerns have more to do with the implications of technological application than with the protection and use of natural systems. Nuclear power, toxics, and air pollution have the highest concern. More traditional topics like wilderness, forest management, and wildlife, the least. This would appear to mean that an urban-based environmental agenda is different from a natural resource management-based environmental agenda.

INSTITUTIONAL METHODS FOR MANAGING RESOURCES

Given a state dominated by advanced industrial forces, it is important to take stock of the methods in place to direct the use of resource systems. Essentially, three different approaches have guided resource land management in California since statehood and before. A first approach was one of use and development. With the arrival of the first Spanish colonists in the late 1700's, grazing became

acting forcefully and quite independently of others created 15 new national forests in California and made large additions to those already in existence (Dana and Krueger 1958). Today, fully 20 million acres, or about 20 percent of the state, is owned and managed by the Forest Service. To this one can add the 17 million acres managed by the BLM, an agency which has more recently come to represent a conservationist approach to management.

The lands owned by the BLM and the Forest Service remain relatively well managed. However, each agency finds itself in the midst of difficult issues concerning future management direction. The BLM faces a significant challenge to the management of the California Desert Conservation Area. Senator Cranston has introduced legislation to place more than half of these lands in wilderness or to transfer management authority to the Park Service. The Forest Service currently is attempting to complete 18 land management plans in California. These plans have been costly to produce and have stirred much public controversy. In addition, the Forest Service must gain approval of a complicated vegetation management environmental impact statement to continue to use herbicides.

In summary, the actions of the use, preservation, and conservation movements have dominated the state's approach to resource management up to the present. In total, three out of every four acres in rural California is controlled by one or another of these entities. Although generally at odds, they represent significant institutional strength. However, if these agencies and industries are to meet the challenges of the future, they must be willing to adjust to change.

STRATEGIES OF ADJUSTMENT

First, it is important that all the groups concerned with resource management questions in California learn to work more closely together. Resource policy here has been dominated by fighting for so long that it seems natural. Differences appear to be poles apart and philosophies distinct. Yet there are commonalities and these should be explored. In the face of the challenge of an advanced industrial machine, the resource community ought to develop strategies in common. Expending all our energies arguing over the same old issues is too expensive. Areas of agreement need to be developed so that the disagreements with others can be more effectively portrayed.

Second, the resource community has to develop better conceptual and planning tools to deal with the future. Too much attention to the small things of immediate interest has kept the community from addressing major events and trends of the times. California's resource and environmental base must be seen as a whole system. Project planning has to take into account the cumulative effects of past, future, and adjacent projects. Lands capable of producing multiple goods must be seen as such. Regional associations and trade-offs need to be evaluated. Importantly, managers need to be satisfied with abstractions and learn to work with generalized data sets and analyses. In an information-based society, information really is powerful. This is a difficult concept for on-ground managers, but the political and business world demands it.

Third, the time has come to accept market solutions as reasonable approaches to resource problems. The fiscal constraints on government are real. Agencies like the Forest Service have less money to spend than they did a few years ago. To augment agency budgets, it is important to explore new funding sources available through fee and other revenue-generating programs. On private lands, markets can be developed for wildlife and recreation access, as California's Ranching for Wildlife program has demonstrated. New, non-governmental ways to improve the capitalization of management programs on both public and private lands must be found. There is nothing profane about making money off the land. After all, John Muir grazed sheep at Tuolumne Meadows in Yosemite to make ends meet.

Finally, there is room to make government more effective. Public landownership boundaries and agency authorities have developed largely as a result of historical accident and political compromise. More can be done to assess where local, state, or federal programs work best. And the luxury of functionally separated departments may be in the past.

These suggestions are not, of course, original. In fact, proponents and practitioners with similar goals are emerging in several areas.

An example is the development of the so-called third wave of the environmental movement. Frederic Krupp of the Environmental Defense Fund, one of the movement's leaders, discussed the third wave last month on the editorial pages of the *Wall Street Journal* (1986). Krupp, and other environmental leaders, believe that the movement needs refocusing to move beyond a knee-jerk response to development pressures.

According to Krupp, the third wave of environmental advocacy will not be satisfied with a precast role of opponent to environmental abuses. Rather, its practitioners recognize that behind projects such as dams, power plants, and waste dumps, there are almost always legitimate social needs, and that long-term solutions lie in finding alternative ways to meet these underlying concerns.

One action front for the third wave is California water policy. California water policy discussions are currently demonstrating movement in the various ways mentioned above. As a *Sacramento Bee* (1987) article

noted, "something fishy is going on in California's often turbulent and acrimonious water wars. After decades of harangues and bloody political battles, farmers and fishermen, developers and conservationists are starting to agree with each other."

What they are agreeing on is the need for the various levels of government and the private sector to work together to solve problems. Over $100 million in federal, state, and private money has recently been committed to fish habitat restoration work as a result of interagency task force recommendations. Consensus has also emerged on the development of water markets so rights holders can sell or transfer their water to a bidder willing to pay for its use. Finally, all this is possible because the Department of Water Resources and others have developed sophisticated techniques to model California's water system and the trends that affect it.

Similar developments are occurring with the Forest Service planning process, the Board of Forestry's approach to hardwood management issues on rangelands, and within the California Interagency Wildlife Task Group. It is important to stay abreast of the successes and failures of these attempts at collaboration and change.

To close, let's review briefly three approaches to the future: reactive planning, proactive planning, and interactive planning.

Reactive planning is an ad hoc response to the present. It was Adam Smith, the free market economist, who was one of the first to articulate the merits of this approach. Smith argued that individuals responding to the incentives of the moment could maximize their own and the collective good. While it is true that a reactive strategy is effective in many areas of social life, it doesn't always work well for the environment. The well-documented problems of the commons, of externalities, and of public goods are witness to this.

Proactive planning is an active response to the future. Many advocate the value of this approach. However, proactive planning seems fraught with risks for two reasons. First, it is very difficult to predict the future. Second, you have to commit yourself to a course of action without any opportunity for feedback until the moment of truth arrives.

Interactive planning, on the other hand, is creative. One attempts to create the future. In this mode, social actors try to influence their own behavior as well as the context in which it will occur. Such a planning strategy seems the most appropriate for the resource community in this state. To ensure environmental and resource systems for the future, one must attempt to alter a contextual frame which lies beyond the land base. The future for the whole state lies largely with the institutions and communities of urban California. Planning to meet such a reality is a challenge each of us faces.

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