

HEALTH IN GENERAL PLANS
AN EVALUATION OF SAN JOAQUIN VALLEY GENERAL PLANS

A Thesis

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by

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ii

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Abstract
of
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The rise of chronic health conditions in the San Joaquin Valley has increased the focus on general plans as a tool to improve public health. General plans are the blueprints for cities and counties as they guide the development of the physical environment. My thesis evaluates the incorporation of public health goals into the general plans of the cities and counties in the San Joaquin Valley.

I used a case study selection method and evaluation framework relying on the American Planning Association (APA) *Healthy Planning Report* (2012) and the *How to Create and Implement Healthy General Plans Toolkit* (2012). Because of my case study selection method results, I surveyed the general plans of two counties and seven cities in the San Joaquin Valley. I created a set of evaluation questions for seven health topic categories and scored each general plan on its inclusion of health goals or policies.

I found that general plans in the San Joaquin Valley contain health topics that affect the physical environment. I also discovered that cities and counties include these topics throughout their general plans. Local general plans in the San Joaquin Valley largely concentrate on planning for physical activity and transportation. They do not

include planning for nutrition opportunities as often as they discuss physical development. However, the inclusion of health-related topics may increase as studies connecting planning and health continue to link health outcomes with the built environment. My evaluation found that small cities are planning for health within their fiscal capacity and community needs.

_____, Committee Chair
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Date

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TABLE OF CONTENTS

	Page
Acknowledgements.....	vii
List of Tables	x
List of Figures.....	xi
Chapter	
1. INTRODUCTION.....	1
Purpose.....	1
Public Health in the San Joaquin Valley.....	2
The Local Planning Process.....	6
Planning and Health in the San Joaquin Valley.....	10
Organization of Thesis.....	12
2. LITERATURE REVIEW	13
Public Health and Planning.....	13
Current Public Health and Planning Policy Efforts	16
City Adoption of Health Promoting Policies	20
Implications from my Research	24
3. METHODOLOGY	25
California General Plan Requirements	26
Health in the General Plans of the San Joaquin Valley	29
Analytical Framework	31
4. GENERAL PLAN EVALUATION RESULTS	38
Case Study Selection Results.....	38
Evaluation Results	39

Introduction and Access.....	40
Physical Activity.....	42
Transportation.....	45
Air and Water.....	48
Food and Nutrition.....	51
Mental Health and Social Capital.....	56
Safety and Health Care Access.....	57
Conclusion.....	60
5. CONCLUSION.....	62
Summary.....	62
Findings and Policy Implications.....	62
Limitations of Thesis.....	66
Future Research Opportunities.....	67
Appendix A. San Joaquin Valley County and City General Plan Availability.....	70
Appendix B. Case Study Evaluation Scores.....	74
References.....	77

LIST OF TABLES

Tables	Page
1. Sample Health Elements and Integrated Health Language in California General Plans.....	7
2. Office of Planning and Research General Plan Advisory Guidelines.....	27
3. Advisory Health Topics Used to Model Evaluation Framework.....	33
4. San Joaquin Valley Case Study Selection Criteria.....	34
5. Health Topics and Evaluation Questions.....	37
6. City and County Profiles.....	39

LIST OF FIGURES

Figures	Page
1. Health in San Joaquin Valley General Plan Elements.....	30
2. Introduction and Access.....	40
3. Physical Activity.....	43
4. Transportation.....	46
5. Air and Water.....	49
6. Food and Nutrition.....	52
7. Mental Health and Social Capital.....	55
8. Safety and Health Care Access.....	58
9. Category Percentages.....	60

Chapter 1

INTRODUCTION

In California, a general plan outlines and guides the future physical environment of a city or county as it includes a vision of the area, goals, and policies. According to the World Health Organization (2012), the health of the community and individuals is the result of a variety of factors including the social environment, the economic environment, the physical environment, and each person's individual characteristics and behaviors. The rise of chronic health conditions such as asthma, obesity, and diabetes has increased the focus on the physical environment as a tool to improve public health. The general plan guides planning in California and can be used as a vehicle to improve the safety and condition of physical environments in areas with high chronic conditions. My thesis examines how cities and counties in the San Joaquin Valley are incorporating public health goals into their general plans

Purpose

The San Joaquin Valley is the lower portion of California's Central Valley. The region has a very diverse population, a mostly agricultural economy, air pollution, and some of the highest rates of asthma, obesity, and diabetes in the nation. Local governments can incorporate health into their general plans by adding health language to the required elements in the general plan or by outlining health issues more directly in a health element. The purpose of my thesis is to determine if local officials include public

health goals in their general plans. The rest of my introductory chapter will summarize some of the major components of local government planning and introduce some of the issues the San Joaquin Valley is currently facing. My literature review will follow and my methodology will introduce my evaluation framework. I will use the *How to Create and Implement Healthy General Plans Toolkit* (2012) health language recommendations to create an analytical framework based on the American Planning Association's (APA) *Healthy Planning Report* (2012) evaluation framework.

Public Health in the San Joaquin Valley

The San Joaquin Valley

The San Joaquin Valley sits in the lower portion of California's Central Valley. It is composed of the Counties of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and Kern. The San Joaquin Valley's unique geography and demographics make it different from the rest of California and the Nation. Planning experts believe the San Joaquin Valley "will be California's greatest planning problem over the next 20 years" (Fulton & Shigley, 2005, p. 35).

The population of the San Joaquin Valley has increased for two reasons: 1) more people moving in from other areas of California for the cheaper housing and cost of living, and 2) farm labor immigrants becoming permanent residents of the area. The growth in population has increased urbanization pressures, and the development of agricultural land (Fulton & Shigley, 2005). The region's population spillover pressure is

concentrated in areas closer to the San Francisco Bay area and the Los Angeles area (Teitz, Dietzel, & Fulton, 2005).

Immigrant workers are attracted to the year-round agricultural work that allows farm workers to settle down in the area; they tend to be young and have low educational levels. In 2003, San Joaquin Valley counties occupied six out of the seven spots on the list of farm counties and produced about 60 percent of all crops statewide (Fulton & Shigley, 2005, p. 35). A young population, low educational levels, and high poverty characterize the social and economic structure of the San Joaquin Valley (Teitz, Dietzel, & Fulton, 2005).

The high immigration levels have affected the population of the San Joaquin Valley. Compared to California and the United States the region has a large Hispanic population. At the county level, the racial segregation differences are not as apparent, but census tract figures show that some counties have areas with a 90 percent Hispanic population (Place Matters, 2012). In 2009, the population was 48.5 percent Hispanic, 38.2 percent White, 5.7 percent Asian, 4.5 percent Black, and 3.1 percent other (Place Matters, 2012). During the same time, the area reported a much higher poverty rate compared to California and the national average. More than one-fifth or 20.4 percent of households reported incomes below the federal poverty level, compared to 14.2 percent for California and 14.4 percent at the national level (Place Matters, 2012).

Air Quality and Water Access in the San Joaquin Valley

The bad air quality in the San Joaquin Valley is a contributing factor to respiratory health problems in the region. The California legislature has passed three bills within the last ten years targeting air quality. In 2003, The California Legislature approved AB 170 (Reyes, 2003) the Air Quality Element bill that requires each city and county within the San Joaquin Valley Air Pollution Control District jurisdiction to include air quality standards in their general plans. The Global Warming Solutions Act of 2006, AB 32, (Pavley, 2006) requires a reduction of greenhouse gas emissions by 2020. In 2008, the Sustainable Communities and Climate Protection Act of 2008, also known as SB 375 (Steinberg, 2008) became law and requires the California Resources Board (CARB) to set greenhouse gas emission targets for local governments. The policy targets the reduction of vehicle miles traveled (VMT) by vehicles and trucks and coordinates those goals using the local planning process.

According to the EPA Strategic Plan (2011) trucks are one of the largest sources of air pollution in the San Joaquin Valley. The strategic plan includes plans to reduce air pollution concentrations by seven percent through regulatory actions. In addition, the plan also include a campaign to create partnerships with businesses that will increase the use of electric trucks in the region and educate diesel truck drivers to decrease the idling of diesel trucks.

According to the *Place Matters Report* (2012), Tulare County has the highest toxic air problems and a high rate of people living below 150 percent of the federal

poverty threshold. Areas of San Joaquin, Stanislaus, Fresno, and Tulare have the highest percentage of Hispanics at an elevated respiratory risk. The American Lung Association *State of the Air Report* (2012) ranked the following San Joaquin Valley areas in the top 25 nationwide as having high year round particle pollution:

1. Bakersfield-Delano
2. Hanford-Corcoran
3. Visalia-Porterville
4. Fresno-Madera
5. Modesto (short term particle pollution)
6. Merced (short term particle pollution)
7. Stockton (short term particle pollution)

The EPA reports that, just like air pollution, water pollution poses health risks for San Joaquin Valley residents. Agriculture depends on water that comes from the Bay-Delta and San Joaquin River, and residents of the Valley mostly consume ground water (EPA SVJ Strategic Plan, 2011). The EPA (2011) reports that out of 2,354 community water systems that serve communities with populations with 3,300 or fewer people, 568 reside in the San Joaquin Valley, and 25 percent of those violate one or more drinking water standards compared to only 10 percent statewide. Some of the chemicals found in the water are arsenic and nitrate. Pesticide use in agriculture also contributes to the pollution of the ground water. In addition, the use of pesticides in crops affects the health of farm workers through skin contact, ingestion, or inhalation.

Asthma and Obesity

Residents of the San Joaquin Valley have similar life expectancies compared to California and the United States. However, there are about 460 premature deaths attributed to air pollution with an economic cost of \$3 billion per year (Place Matters, 2012). Children in the San Joaquin Valley have asthma at a rate of one in six before the age of 18 (Place Matters, 2012). A ten-year study of the area found that from 2003 to 2009 the rate of obesity increased from 26 percent in 2001 to 32 percent in 2009 among adults failing to meet the target of 15 percent obesity rate for the area (Lee, 2012). Among adolescents, the rate decreased from 15 percent to 10 percent, but still failed to meet the target goal for the area of five percent (LEE, 2012).

The Local Planning Process

The local planning process involves various agencies and a variety of policies. . . In this section, I will summarize the major local planning requirements and include a brief explanation of the various agencies and their responsibilities. I will be referring to these terms throughout my thesis. All cities and counties must create a general plan and zoning ordinance.

General Plans

The Governor's Office of Planning and Research (OPR) is responsible for updating advisory general plan guidelines, monitoring general plan implementation, and granting general plan extensions. The current general plan guidelines require seven

elements: land use, circulation, housing, conservation, open space, noise, and safety (OPR, 2003). Cities and counties must update the housing element every five years, but all other elements can be updated according to their own long range planning schedule. Health is not a required element, but local governments are incorporating health into their existing general plan elements or adding health as an additional element. OPR will be updating the general plan guidelines in 2013 and are considering including health guidelines. The following chart presents various cities in California that have adopted a health element or have integrated health goals and policies as part of their general plan language:

Table 1: Sample Health Elements and Health Language in California General Plans

City/County Name	General Plan Element/Integrated Language	Policy Descriptions
Anderson	Health & Safety Element (2007)	Physical activity, mixed use, transit orientated and infill development.
Chino	Healthy Chino Element (2008)	Physical activity, walkability, nutrition, public safety, and civic participation.
Richmond	Community Wellness and Health Element (2008)	Walkability, healthy food standards, parks and open space.
San Pablo	Health Element (2011)	Transportation, healthy food access and equity, access to services, and health and safety.
Sacramento	Integrated Language (2008)	Public transportation, mixed use, and transit oriented development.
Azusa	Integrated Language (2004)	walkability, street connectivity, mixed use development, and the built environment.
Chula Vista	Integrated Language (2005)	Walkability, healthy foods, pedestrian and bicycle safety and job housing balance.
Paso Robles	Integrated Language (2003)	Walkability, mixed use development and development along transportation corridor.
Watsonville	Integrated Language(2006)	Healthy food access, public transportation on grocery store routes and supporting local organizations.

Note. Modeled after www.healthcitiescampaign.org/general_plan.html. Information confirmed through a search of city websites and google search engine.

Cities and counties are each responsible for creating a general plan. Each jurisdiction's legislative body is responsible for creating the process to carry out a general plan. Cities and counties can have planning departments and commissions that process projects and evaluate how well they comply with their general plan requirements. These planning bodies can create zoning plans, subdivisions regulations, and other ordinances necessary to carry out the general plan. Depending on the city, the powers sometimes rest with their legislative body.

Zoning

The zoning plan is a map that shows what type of allowable uses the city permits in the area. For example, a plan can designate areas as residential, commercial, or open land. There are different types of zoning ordinances and plans a city can include. The first exclusive zoning allows only for one type of use per zone, separating industrial, commercial, single family, and multifamily residential areas (Fulton & Shigley, 2005, p. 56). Due to the large lot requirements, this type of zoning is unfavorable because it creates urban sprawl.

Mixed-use zoning is more flexible, as it allows housing and business to co-exist. For example, old office buildings can become affordable housing. New buildings can have retail shops at the ground level and housing or office space above.

Impact/performance zoning looks at how a building fits with the rest of the neighborhood and whether its use will have any negative impact. For example, if the building includes plans for a business that will need parking, the building will have to include a parking plan (Fulton & Shigley, 2005, p.131).

A new zoning approach is form-based code zoning that does not focus on the use of the buildings, but instead focuses on their design and how they fit with the neighborhoods. Form-based codes usually separate use standards such as parking, but planning professionals believe form-based codes should factor in neighborhood or district level codes that include impact/performance zoning standards (Fulton & Shigley, 2005, p. 314).

Local governments have the power to approve local ordinances that either restrict or allow certain land uses and they have the power to regulate urban sprawl. The Subdivision Map Act gives local governments the ability to regulate new subdivisions §66410. The Community Redevelopment law is part of the Health & Safety Code and allows local governments to redevelop blighted areas §33000. However, California budget problems caused the elimination of redevelopment agencies in 2012. Other major planning considerations are included in the following section.

CEQA

The California Environmental Quality Act (CEQA) establishes a system of environmental reviews for development projects in California §21000. General Plans also go through an Environmental Impact Review (EIR) before their local governments approve them.

LAFCO

The local agency formation commission (LAFCO) is a special countywide agency that processes all annexations, incorporations, and boundary changes. The Cortese-

Knox-Hertzberg Local Government Reorganization Act governs LAFCO rules (Fulton & Shigley, 2005, p.69).

COG

Council of Governments (COGs) are regional agencies that administer federal grants, focus on regional transportation, and work to find solutions on regional issues. COGs are the agencies in charge of allocating regional housing numbers to comply with housing element requirements of city and county general plans within their region (Teitz, Dietzell, & Fulton 2005).

Local governments have control over what happens in the physical environment under their jurisdictions. They can use a variety of planning tools to create healthy environments. These tools evolve as new planning concepts emerge and are merging with older processes.

Environmental Justice

The 2003 *General Plan Guidelines* included Environmental Justice (EJ) guidance for the first time. In 1999, SB 115 (Solis, 1999) required OPR to guide cities and counties in the incorporation of Environmental Justice language into their general plans and made OPR the coordinating agency for related programs. The *General Plan Guidelines* (2003) connects Environmental Justice to sustainable development at a local level and to “smart growth” at the regional level. OPR’s 2003 guidelines refer to sustainable development as promoting the three E’s: Environment, Economy, and Equity. The Environmental Justice recommendations focus on topics such as infill development, transportation, open space conservation, promoting mixed income, promoting energy

efficiency, and jobs/housing balance. Some of these topics cover many of the planning goals that can help promote public health as the movement to promote public health awareness in low-income regions and focus on present health issues has roots in the Environmental Justice movement.

Planning and Health in the San Joaquin Valley

There is not enough research on planning trends and changes in the San Joaquin Valley. The region is geographically diverse, as it is composed of agricultural land, rural towns, suburban areas, and cities. However, OPR for the very first time included health-related questions in its Annual Survey (2012). One of the questions asked planning officials if health is included in their jurisdiction's general plan. Out of the 462 cities and counties that responded to the question, 50 cities are located in the San Joaquin Valley. Only Tulare County, Stanislaus County, San Joaquin County, Kings County, and Kern County answered the question. Eleven cities in the San Joaquin Valley indicated that health can be found in their circulation element, eight in their conservation element, four in their housing element, 17 in their land use element, eight in their open space element, and 15 indicated their jurisdiction does not have any such policies. Only two cities indicated they had a health element; the largest number, 18 cities, indicated health is included in their safety element (OPR Annual Survey, 2012).

Organization of Thesis

This thesis is a qualitative study that uses existing studies and toolkits available to create an evaluative framework to analyze general plans in the San Joaquin Valley. In this section, I summarize the remaining chapters and conclusion.

In my Literature Review, chapter 2, I summarize the background and history of health and planning. Second, I outline the existing toolkits and literature related to the inclusion of health topics in planning. Then, I collate literature related to current health and planning topics.

Chapter 3 presents my analytical framework. I first summarize the California general plan requirements and relevant policies, as they are the parameters that cities and counties are working with to create their general plans. Lastly, I present my research methodology, and evaluation questions.

Chapter 4 includes my San Joaquin Valley general plan evaluation results. I first present the cities and counties that I selected using the evaluative framework. Afterward, I present the results of my scoring on my evaluation health topics.

Lastly, in Chapter 5 I discuss my results and implications and conclude with suggestions for further research

Chapter 2

LITERATURE REVIEW

The body of literature on local planning and health is limited but growing. The purpose of my literature review is to find how public health goals and issues are becoming part of local government planning policies. I searched for articles and studies using Google Scholar, the EBSCO database, Proquest database, Lexis Nexis database, and journals available through the Sacramento State library. I narrowed my search to articles published within the last ten years. The relevant literature found guides my methodology and research questions. I only located a few articles related to health topics and the San Joaquin Valley. The articles show increased interest in the region and guide my methodology. I first examine the roots of public health and planning. I then discuss how planning and public health are interconnecting now. I include a discussion of the various toolkits available that guide officials and advocates in creating health promoting general plans. Lastly, I analyze city adoption of health promoting policies.

Public Health and Planning

Historically, health was one of the main driving forces of planning in the United States. During the Industrial Revolution, planners concerned over the spread of disease used states' regulatory power to address sewer problems, clean water, and poor living conditions. One of the first acts to address health and planning was the New York City House Tenement Act of 1901. The act was part of a series of acts that set specific

building codes to protect people by requiring windows and fire escapes (Frank & Kavage, 2008).

New York implemented many land use regulations, but one of the oldest cases regulating health is the 1867 California Supreme Court case of *Shrader vs. San Francisco*. The City of San Francisco had banned slaughterhouses, as authorized by the State of California in 1862, from certain areas of the city. The State authorized San Francisco to “make regulations necessary for the preservation of the public health and the prevention of contagious diseases,” (Fulton & Shigley, 2005, p 41). During this period, Public Health had a strong influence in municipal politics with city governments operating under two law maxims: *salus populi suprema lex est* (the welfare of the people is the supreme law), and *sic utere, tuo ut alienum non laedas* (use your own as to not injure another) (Robichaud, 2010).

At the start of the 20th century, planning focused on land use challenges of cities and towns. Zoning became a popular planning tool by the early 1900s, and after the 1926 Supreme Court case of *Euclid v. Ambler Realty*, it became constitutional. Zoning is cited as one of the tools that can be used to manage health, as one of its main purposes from its inception was to separate industrial areas of towns from housing areas (Fulton & Shigley, 2005). California passed zoning requirements in the late 1920s and required all cities and counties to prepare general plans in 1937. The general plan and zoning ordinances have to be consistent, as required by law since 1971. It is the “consistency” principle in planning. The change took place after post-war housing boom and planning trend switch from cumulative zoning to exclusive zoning, which influenced the growth of suburbs.

The environmental movement to conserve and preserve natural resources influenced many of the planning decisions during this time, as planning moved towards an environmental focus. The year prior to California passing the “consistency” principle, the state passed the California Environmental Quality Act (1970) following the passage of the National Environmental Policy Act (1969) (Fulton & Shigley, 2005).

The fields of health and planning grew increasingly separated by the late 20th Century. During this time public health started to focus more on lab work intense investigation of human health concerns such as germs and air toxins (Corburn 2004). There has never been any codification of health language requirements, and although plans currently have some elements of health, they are largely implicit and not explicit. Lubarsky (2007) argues that there are three legal approaches to integrating health in general plans. The first is a legal requirement that codifies into California state law the requirements for general plan elements and adds legally binding language that requires collaboration between planning and health agencies. The second legal approach requires adding a health element as part of general plan guidelines, and lastly Lubarsky (2007) argues challenging elements of existing general plans in courts would reconnect general plans and public health. Although California courts do have a long history of setting precedent with various rulings regarding general plans and community planning, challenging individual elements might be costly for many cities suffering from budget cuts. Advocacy and leadership take much longer, but they might be less contentious and less damaging to existing relationships between planners, experts, and community leaders. The first two legal approaches are more feasible and flexible for agencies and

local governments as some are already moving towards collaborative efforts and including health in their general plans.

The separation of health and planning changed the way health experts and planners define health. Feldstein (2004) notes that “except as it relates to seismic safety, hospitals, and similar situations general plans have rarely addressed health issues” (p. 11). Corburn (2004) argues that some of the problem lies in the language used to describe health activities. For example, sustainability movements and walkable city movements define additional bike lanes as more sustainable practices because they encourage the reduction of vehicle miles traveled and therefore lower the pollution levels. However, policies do not always address the health benefits of physical activity. Health benefits are a secondary positive effect and not a central piece of the discussion. The effect on human health is not central to the goals of the policies, and therefore, there is no increased awareness or health outcomes expectation that can measure quality of life.

Current Public Health and Planning Policy Efforts

One of the first cities to adopt a health element as part of its general plan was the City of Richmond. Richmond and Oakland are examples of low-income areas close to industrial centers that have become case studies for the reconnection of health and planning. Health and planning experts are reconnecting both fields in a variety of ways. One example is the Contra Costa County’s Planning Integration Team for Community Health (PITCH). The partnership includes the Community Development Department, Health Services Department, and Public Works Department (Baer & Rattray, 2007).

Experts and advocates are increasingly using Health Impact Assessments (HIAs). HIAs have a similar function to Environmental Impact Reports (EIRs), but focus on a development's impact on public health (Frank & Kavage, 2012). Many of these policies are not widely used, as there is still debate over how much influence local planning policy can have on health issues such as obesity.

There is still debate over the best way to decrease obesity rates. Hutch et al in "Potential Strategies to Improve Public Health" (2011) outlines the community factors and family and individual factors that cause the disproportionate health outcomes. The researchers emphasize the need to create collaborative efforts to identify strategies to reduce the health disparities because there is not one root cause of health problems.

What issues are "health" issues?

There is no uniform definition of health as it is composed of various issues. Current health issues receiving attention are obesity, nutrition access, physical activity, and asthma. Counties like Contra Costa and San Mateo have included mental health, and safety from violence and homicide in their policies (Baer & Rattray). In "Healthy Planning Policies: A Compendium from California General Plans" (2012) researchers compiled a list of health policies from California cities that have adopted health policies, and evaluated them for "innovative land use topics" such as raising the profile of public health, health care and prevention, healthy food access, equity, and environment. The article only presents sample topics but does not quantify findings. None of the cities, in the article, is located in the San Joaquin Valley, but some cities included are located in my Table 1 p. 7.

I was able to find toolkits that guide advocates on how to integrate health into general plans. Two of the toolkits currently available online are Feldstein's "General Plans and Zoning: A Toolkit for Building Healthy Communities" (2007) and Raimi and Associates "How to Implement and Create Healthy General Plans toolkit" (2012). The Institute for Local Government produced "Land Use and Planning: Guide to Planning Healthy Neighborhoods" (2010). Feldstein and Raimi outline a model resolution and various language models that cities can use in their general plans. One of the models uses language from the City of Benicia's General Plan, which describes the dimensions of optimal health to be the physical environment, the social environment, emotional health, intellectual environment, and spiritual environment. The policy choices in the models range from promoting drug free environments, promoting farmer's markets, requiring annual reports on community health, community gardens, and creating open collaboration with the community.

The Institute for Local Government (ILG) (2010) Guide does not just focus on general plans, but offers several alternative ways that cities can integrate health. The ILG recommends the use of:

- Local plans or specific plans that focus on one geographic area such as subdivisions.
- Local programs and services such as recreational programs offered by parks and recreation departments.
- Requiring property owners to maintain clean and safe areas through code compliance and enforcement.

- Economic development, and redevelopment which helps increase revenue and improves the infrastructure of the city. Health status correlates strongly with the economic status of places.

The toolkits are a good example of how cities and advocates can differ on the best way to tackle chronic health conditions that exist in their communities. Cities are struggling to balance their budgets and have limited resources to devote to overhauling their general plans. The ILG recommendations provide alternatives that can be less costly for cities, while the toolkits from Feldstein (2007) and Raimi (2012) focus on changing the general plan, changing zoning codes, and creating area or issue specific master plans. The toolkits recommend further research on funding take place as part of healthy city planning.

I will discuss the adoption of sustainability policies in my next section, but the only report that I was able to find that examined the adoption of health elements and sustainability policies is the American Planning Association's (APA) *Healthy Planning Report* (2012) . In the study, the APA created an evaluative framework to analyze 18 comprehensive plans and four sustainability plans from cities across the nation. It used 79 questions to evaluate the plans. The APA found that most of the plans they evaluated include active living goals that language is accessible to the average reader and that water quality and environmental concerns were present. In addition, the APA found that only two of their plans identified vulnerable populations, only three plans identified chronic diseases or health disparities in their vision, and only two plans identified brownfield's as threat to human health. I will use the *How to Create and Implement Healthy General*

Plans Toolkit (2012) health language recommendations and the APA's *Healthy Planning Report* (2012) to create my own evaluation framework.

City Adoption of Health Promoting Policies

In this section, I examine the adoption of sustainability and the adoption of air and climate change promoting policies. First, I outline the literature on sustainability policies, as many sustainability principles affect health and their adoption might already include public health outcomes as a goal. Secondly, I found no literature on local governments' adoption and implementation of state imposed state climate standards, but I did find literature on local governments' voluntary adoption of climate policy.

The most cited work in the following readings was Kent Portney's (2002) work, "Taking Sustainable Cities Seriously: a Comparative Analysis of Twenty-Four US Cities." In his study, he created a sustainability index with 34 elements of sustainability divided into seven categories. Two of the major findings in his case study are that cities that rely on polluting manufacturing industries as the base for employment and cities with younger populations are cities that take sustainability less seriously (p. 374). He found that population growth or rapid population growth does not put pressure on local governments to adopt sustainability policies (p. 377). The case study focused on large cities, but the findings are important because sustainability deals with the "triple bottom line" or environmental protection, economic development, and social equity (Saha & Paterson, 2008). The principles apply to environmental justice and social equity and are one of the main tenets of health advocacy. There currently is no index available for

health related language, but the following readings add to Portney's (2002) work and findings.

A. Factors in City Adoption of Health Promoting Land Use Policies

In "City Adoption of Environmentally Sustainable Policies in California's Central Valley," Lubell, Feiock, and Handy (2009) use Portney's (2002) work and Conroy's (2006) recommendation to focus on less known communities and create an Environmental Sustainability Index for the Central Valley. Lubell, Feiock, and Handy (2009) find that adoption of environmental sustainability policies is a largely urban phenomenon with cities that are more populous, more financially independent, more socioeconomically advantaged, and have higher stores of intellectual capital. Portney and Berry (2010) believe that demographic factors alone do not offer the full explanation because large cities with similar economic resources do not always adopt sustainability policies. Some do and some do not.

In their study, "Urban Advocacy Groups, City Governance, and the Pursuit of Sustainability in American Cities" (2010), Portney and Berry find that there are very few barriers to entry when comparing city governments to federal governments. There is also very little lobbying opposition by interest groups; with the exception of zoning and land use regulation by business groups at the city level. In terms of access to political leadership, both business groups and neighborhood associations enjoy the same high level of access. Support for sustainability is greater when labor unions, environmental organizations, and neighborhood associations contact administrators. Portney and

Berry's study is in line with sustainability studies by Zeering (2009) and Salvasen et al (2008). Zeering, in his study of San Francisco Bay area cities, found that the way economic development officers conceptualize sustainability affects programmatic priorities. There are "aspiring city" officials that focus on future changes, "traditional city" officials that focus on the retention of current business and economic development, and "participatory city" officials that try to improve civic participation.

Salvesen et al, 2008, in a case study looking at implementation of local policies that promote physical activity in Montgomery County, Maryland found that one of the major issues with implementing physical activity policies is fragmentation among agencies and coordination of policy implementation. The study used interviews to examine knowledge, awareness, commitment and county capacity, and intergovernmental coordination. The study found that knowledge and awareness did not have as much impact as the commitment and leadership of county officials.

B. Air Quality and Climate Change Policies

The San Joaquin Valley has some of the highest asthma rates in the nation. Air quality improvement is very important to the health of the residents in the area. The region is unique, as the cities within its boundaries have to adopt air quality standards through AB 170 (Reyes, 2003). The following literature offers some insight into cities' decision to adopt air quality and climate policies.

Various studies available examine city adoption of climate change policy. Krause's (2009) results were consistent with Portney's (2002) findings that increased reliance on manufacturing in the local economy decreases the probability that a city will

commit to climate protection. Krause (2009) found mayor-council government type of cities with higher levels of education and democratic political leanings were more likely to adopt climate policy. Sharp, Daley, & Lynch (2011) studied membership in the International Council of Local Environmental Initiatives (ICLEI). The Council offers technical assistance to cities that pledge to reduce Green House Gas (GHG) emissions. Consistent with Krause (2009), Sharp, Daley, & Lynch (2011) found that cities with mayoral form of governments and high environmental interest group presence are more likely to join ICLEI. However, unlike Krause (2009) and Portney (2002), they did not find manufacturing presence to make a difference in a cities decision to join ICLEI, but did not consider their results to say opposing interest do not make a difference in a city's decision to join ICLEI.

The San Joaquin Valley is required to include air quality standards in their general plans because of AB 170. At the regional and county level, there has been recent adoption of Blueprint smart growth principals through collaborative regional efforts coordinated by COGs. They include health and air quality-promoting principles. A four scenario study, conducted by Mark Hixon et al (2010), on the influence of regional development policies and clean technology adoption on future air pollution exposure in the San Joaquin Valley found that compact high density urban development combined with added pollution controls at the local level can significantly reduced pollution levels. Regional collaboration to plan for the long-term prosperity of the area is taking place (Harnish, 2010).

Implications from My Research

Research on sustainability and land use tends to focus on urban areas and large cities. Researchers are recommending more focus on smaller cities. In the literature, I found that cities and counties that face population spillover pressures might not always adopt sustainability or health promoting policies. Adoption of health promoting policies tends to be an urban phenomenon with cities that are larger and financially independent being more likely to adopt policies. If this is the case, I expect that larger cities in the San Joaquin Valley will have more health promoting policies in their general plans

Chapter 3

METHODOLOGY

The purpose of this study to analyze how cities and counties in the San Joaquin Valley are incorporating public health goals in their general plans. General plans are the blueprints for the built environment for cities and counties in California. Traditionally general plans have focused on issues such as noise reduction, sewer and clean water services, exposure to hazardous materials, and seismic safety (Stair, Wooten, & Raimi, 2012). I will focus on the integration of public health goals and policies in general plans. Public health concerns are becoming part of general plan language as research has started to link chronic health conditions such as respiratory diseases, obesity, nutrition, and physical activity to the built environment.

Although experts advocate for higher integration of health language in general plans, they caution against clustering modern health issues into a health element without integrating the health language into the other seven elements (Stair, Wooten, & Raimi, 2012). I will use the *How to Create and Implement Healthy General Plans Toolkit* (2012) health language recommendations to create an analytical framework based on the American Planning Association's (APA) *Healthy Planning Report* (2012). I will also build on the work done by the Governor's Office of Planning and Research (OPR) *Annual Survey Results* (2012). The survey includes various public health questions.

This chapter will first summarize general plan requirements, air quality requirements, and smart growth planning in the San Joaquin Valley. I will then present the major modern health issues as described by *How to Create and Implement Healthy*

General Plans Toolkit (2012). Next, I will outline my analytical framework based on the APA's *Healthy Planning* report (2012). Lastly, I will explain my case study selection and evaluation research questions.

California General Plan Requirements

In this section, I will explain more in depth OPR's advisory *General Plan Guidelines* (2003), and summarize major planning changes in the region. The State of California requires cities and counties to adopt a general plan under Government Code §65300. Cities and counties must include seven elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety (§65302). Cities and counties can also include optional elements that are relevant to their long range planning and needs under §65303. Some of the optional elements examples included in *the General Plan Guidelines* (2003) are air quality, community design, and energy.

The Governor's Office of Planning and Research (OPR) is in charge of periodically revising and updating the advisory guidelines (§65040.2) (OPR, 2003). The 2003 *General Plan Guidelines* include a section that discusses Sustainable Development and Environmental Justice. They are not required elements in the general plan but they deal with the three E's in planning: Environment, Economy, and Equity. Sample issues are mixed use development, job-housing balance, land use density, and open space & parks recreation. Table 2 in the following page includes a summary of OPR's *General Plan Advisory Guidelines* (2003).

Table 2: Office of Planning and Research General Plan Advisory Guidelines

Office of Planning and Research General Plan Advisory Guidelines and Issues	
Element	Advisory Guidelines
Land Use	The element is the broadest in scope and plays an important role in zoning, subdivision, and public works decisions. The element lays out the ultimate pattern of development for a city or county and is the most representative of the general plan.
	Distribution and location of housing, business, industry, open space & agricultural land, public facilities, buildings, and grounds, and other categories of public and private land uses
Circulation	The element is the infrastructure plan that deals with the movement of people, goods, energy, water, sewage, storm drainage, and communications. The element must correlate with the Land Use element.
	Major thoroughfares, transportation routes, sewage, plus other infrastructure topics.
Conservation	The element primarily focuses on the conservation of natural resources. Water, forests, soils, minerals, rivers, harbors, fisheries, wildlife, and other natural resources.
Open Space	The element guides the comprehensive and long-range preservation of open space land. It is the second most detailed in its statutory requirements covered under §655561 and §65562 of the Government Code. The element is the second broadest after the Land Use element.
	Preservation of natural resources and outdoor recreation space availability. Any parcel, area of land, or water that is dedicated to open space such as bays, forest land, mineral areas, and areas of scenic or historical significance.
Noise	The element guides land use decisions, location of transportation facilities, and roads as they expose the community to high noise levels. The element must analyze and quantify the levels of noise as well as include possible implementation measures and solutions.
	Major noise sources and existing and projected levels of noise.
Safety	The element guides local decisions related to zoning, subdivisions, and entitlement permits. The goals of the safety element must be to reduce risks of death, risk of injuries, property damage, earthquakes, and other hazards.
	Flood hazards, Seismic hazards, Fire hazard, Landslides, Other hazards
Housing	Usually a separate element it has the most detailed requirements under Article 10.6 of the Government Code §65583 through §65590. Cities and counties must assess what their existing and projected housing needs are and update the element every five years.
	Regional Housing Needs Assessment (RHNA)

Note. Created using information from: Office of Planning and Research (OPR).(2012). General Plan Guidelines 2003. Retrieved July 1, 2012 from: http://www.opr.ca.gov/s_generalplanguidelines.php

The 2003 *General Plan Guidelines* recommend that city and county general plans avoid any repetitiveness in the elements. The topics covered by the elements overlap, and therefore, elements do not have to be separate elements as long as all statutory requirements are included (OPR, 2003). The three guiding principles are: 1) all general plans must include integrated, 2) they must be internally consistent, and 3) they must be a compatible statement of policies (Government Code §65300.5) (OPR, 2003). They have to be complete and include all seven elements, be readable to the public, and address local relevant issues. They have to be in substantial compliance with statutory requirements per *Camp v. Mendocino County*, and must plan only to the extent a problem or opportunity exist §65300.7.

Planning in the San Joaquin Valley

Air quality is not a required element under the 2003 *General Plan Guidelines*. However, because of Assembly Bill 170, San Joaquin Valley Cities and Counties had to add it as an element or amend their general plans. The San Joaquin Valley Unified Air Pollution Control District had to receive adopted amendments from Fresno and Kern Counties by 2009 and Kings, Madera, Merced, Stanislaus, and Tulare Counties by 2010. Cities and counties in the San Joaquin Valley must include goals, policies, and feasible implementation strategies to improve air quality §65302.1. The four requirements under AB 170 are:

1. A report describing local air quality conditions, attainment status, and state federal air quality and transportation plans.

2. A summary of local, district, state, federal policies, programs, and regulations to improve air quality.
3. A comprehensive set of goals, policies, and objectives to improve air quality.
4. Feasible implementation measures designed to achieve these goals (San Joaquin Valley Air Pollution Control District, 2012).

The air quality amendments for the San Joaquin Valley are part of an effort to improve health in the region. The Councils of Governments (COGs) and the Madera County Transportation Commission created a collaborative effort to create the San Joaquin Valley Blueprint program. The program addresses twelve smart growth principles for the Valley. Each COG created blueprint principles, which the counties adopted, and became part of the regional Blueprint program (Harnish, 2010). There are 62 cities in the San Joaquin Valley, and out of those cities, 46 cities with populations of 50,000 or less received technical help from the San Joaquin Valley Blueprint Integration Project. The Integration Project assisted smaller cities that needed technical assistance integrating the twelve smart growth principles into their general plans. The program was set to end January 2013. The other 14 large cities are using services of the Smart Valley Places program (Harnish, 2010).

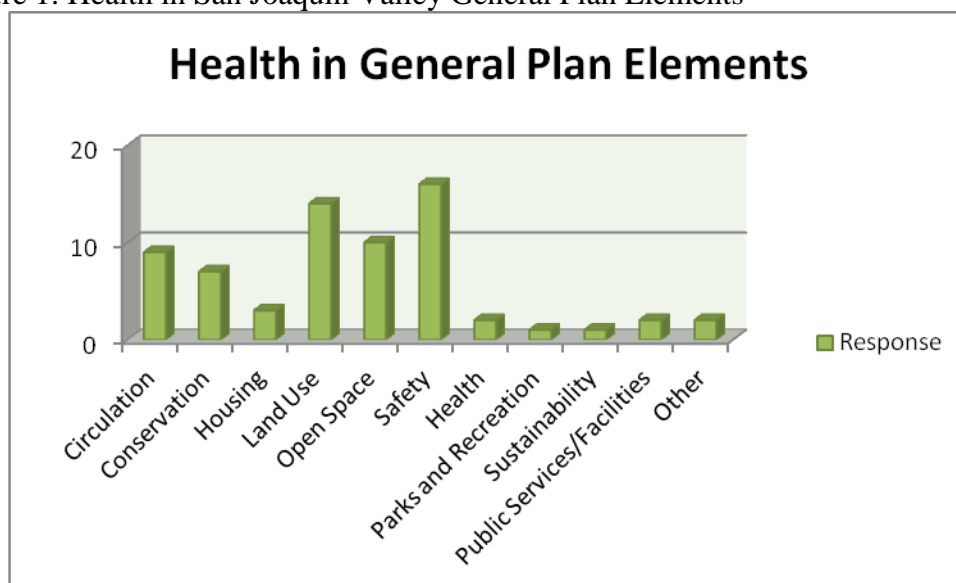
Health in the General Plans of the San Joaquin Valley

The inclusion of health language related to chronic health conditions in general plans is new and only a small amount of cities in California have created separate health elements. OPR will be updating their guidelines this year and are considering including

health guidelines (OPR, 2013). OPR conducts an annual survey of cities and counties on various planning topics and issues in the state. The *2012 Annual Survey Results* were the first to include health related questions.

The survey includes various questions on issues covered by the *APA Healthy Planning Report* (2012) and the *How to Create and Implement Healthy General Plan Toolkit* (2012). The OPR survey asked in what element are health promoting policies or programs contained if the jurisdiction explicitly referenced health protection or promotion in the city or county general plan.

Figure 1: Health in San Joaquin Valley General Plan Elements



Note. Created using: Office of Planning and Research (OPR). (2012)Annual Survey Results 2012. Retrieved May 2, 2013http://www.opr.ca.gov/docs/2012_APSR.pdf

The surveyed received 454 responses for the question and out of those, 33 were from San Joaquin Valley cities and counties. Cities and counties cited the safety element the most, followed by the land use element, and open space (Figure 1). Thirteen San

Joaquin Valley cities responded they have programs or policies that ensured access to grocery stores, citing the land use element the most. Out of all the cities in the San Joaquin Valley that responded to the OPR survey, only the City of Stockton and the City of Arvin responded that they had a health element. My preliminary review found that the City of Arvin is in the process of creating a new general plan that includes a health element, and their current general plan is not available online.

My research will build on OPR survey responses, as I will be looking at the degree of inclusion of public health topics. The *How to Create and Implement Healthy General Plan Toolkit* (2012) offers suggestions on creating healthy general plan language and the analytical framework created by the APA looks into degrees of health inclusion in general plans. Degrees of inclusion can range from a simple mention of the issue to a full plan that includes success indicators. As part of my case study selection process, I did preliminary review of San Joaquin Valley city and county general plans using the following analytical framework:

Analytical Framework

How to Create and Implement Healthy General Plans toolkit (2012) includes a model baseline assessment of health issues in the community and model health language for general plans. Table 3 summarizes some of the model health issues that the toolkit recommends cities and counties include in their general plans. OPR's advice about Sustainability and Environmental Justice includes some of the tools in the toolkit; such as mixed use development, job-housing balance, land use density, open space, and parks and

recreation. The smart growth principles of the Valley Blueprint also cover mixed used, land use density, the preservation of open space and farmland, transportation, and fostering community and stakeholder collaboration. With this in mind, I expect cities and counties to include public health topics in their general plans.

The toolkit warns that if cities or counties decide to include a health element in their plans, they should pay special attention to including the variety of issues holistically throughout their plans. Effective health change will only happen if local health officials insert the concern throughout the plan (Stair, Wooten, & Raimi, 2012). The American Planning Association (APA) *Healthy Planning Report* (2012) includes a qualitative tool to evaluate the plans of 18 cities in the United States. My analytical framework and model uses its final published report. Table 3 includes some of the health topics suggested by the toolkit and the topics the APA used in its evaluation of city and county general plans. I created my evaluation topics based on their suggestions. I will explore accessibility, physical activity, transportation, air and water, food and nutrition, mental health and social capital, and safety and health care access.

Table 3: Advisory Health Topics Used to Model Evaluation Framework

Toolkit Health Assessment Issues	APA Evaluation Topics
Overall Health of the Community <ul style="list-style-type: none"> • Assessment of major health concerns • Links to the build environment • Vulnerable populations • Obesity/overweight rates 	Broad Issues <ul style="list-style-type: none"> • Health included in vision statement • Health is in guiding principles • General plan procedure is accessible
Physical Activity <ul style="list-style-type: none"> • Residential and commercial areas proximity to parks, open space, and recreational facilities • Mix use • Job-housing balance and match • Land use density 	Active Living <ul style="list-style-type: none"> • General • Active transport • Recreation • Injury
Nutrition <ul style="list-style-type: none"> • Access to healthy food • Number of fast food restaurants and offsite liquor retailers • Local agricultural resources • Food distribution 	Food and Nutrition <ul style="list-style-type: none"> • Access to food and healthy foods • Water • Land use
Mental Health and Social Capital <ul style="list-style-type: none"> • Participation • Stability • Community safety 	Social Cohesion & Mental Health <ul style="list-style-type: none"> • Housing quality • Green & open space • Noise • Public safety/security
Air and Water <ul style="list-style-type: none"> • Asthma and other respiratory ailments • Air quality/toxic contaminants 	Environmental Exposures <ul style="list-style-type: none"> • Air quality • Water quality • Brownfields
Transportation <ul style="list-style-type: none"> • Traffic injuries and fatalities • Mode split • Commuting • Transportation network 	Health & Human Services <ul style="list-style-type: none"> • General • Accessibility to health and human services • Aging
	Emergency Preparedness <ul style="list-style-type: none"> • Climate change • Natural and human-caused disaster • Infectious disease

Note. Created using information from: the APA *Healthy Planning Report* (2012) and the *How to Create and Implement Healthy General Plan Toolkit* (2012).

Case Study Selection

In the first phase of APA’s research, they conducted a survey that identified 890 cities whose plans contained the term “public health.” The Centers for Disease Control (CDC) added a list of 45 cities to its pool. The APA narrowed its list to 18 cities and counties by using the criteria listed on Table 4.

To select my case studies, I looked for general plans that included “health” in the title of their elements and health language that mentions the following issues: obesity, nutrition, and physical activity. Appendix A includes all sixteen cities and counties in the San Joaquin Valley that include “health” in their general plans.

Table 4: San Joaquin Valley Case Study Selection Criteria

APA Criteria	Criteria for San Joaquin Valley Evaluation
1. Explicit reference to public health	1. Publicly available and published online
2. Official adoption by city or county ordinance	2. Officially adopted general plans only, no drafts
3. Inclusion of 10 or more health related goals and policies as outlined in the survey	3. General plan contain element with term “Health.”
4. Geographic spread	4. Urban, suburban, and rural contexts
5. Urban, suburban, and rural contexts	5. City and county general plans
6. County as well as city plans	

Note. Modeled after the APA *Healthy Planning Report* (2012)

Research Questions

The major goal of my study is to identify what type of health topics are being covered in general plans in the San Joaquin Valley and identify if there are any common regional success indicators. My study will focus on answering the following research questions:

1. What type of health issues and topics are included in city or county general plans in the San Joaquin Valley?
2. Do the general plans include goals, objectives, and policies the health issues and topics they cover?
3. How do cities and counties plan to track the success of health related policies?

The evaluation part of my study surveys the general plans according to a scoring system based on the APA's *Healthy Planning* (2012) evaluation tool. The APA used Edward and Haines (2007) plan evaluation framework to score the plans using a score of 0, 1, or 2. I will use the same scoring system.

1. A score of 0 if there is an absence of language.
2. A score of 1 if the language is present but there is only background information.
3. A score of 2 if the policy is comprehensive in nature and includes goals or policy actions.

The APA study used eight categories to create 79 evaluation questions for its 18 case studies. The eight categories the APA used overlap the *How to Create and Implement Healthy General Plans* (2012) toolkit categories. I based my evaluation categories on both the APA and toolkit categories. One limitation of my analysis is that I will be the only reviewer of the general plans; the APA had two experts score the general plans the study evaluated. In addition, I am working with a much smaller sample as I am only focusing on the San Joaquin Valley region. I am also only basing my study on general plans that are available online. Although my analysis only looks at 16 cities that

during my preliminary review had a health element, only three cities and one county had health language related to nutrition, obesity, or physical activity, which are public health issues that concern the region.

Evaluation Questions

I separated evaluation questions into goals and policies for each public health topic. I used the APA study to create a set of evaluation questions (Table 5 in next page). In the following chapter, I will outline the results of my general plan evaluation. I expect that cities will be more heavily focused on health issues they can influence through better planning goals, but not be as focused on issues that might be influenced by lifestyle factors such as obesity.

Table 5: Health Topics and Evaluation Questions

Introduction and Access	Does Introduction includes Explicit concern for public health?
	Does Introduction includes topics such as EJ, sustainability, or smart growth?
	Policies target community participation?
	Language used is easy to read and understand? Visual elements aid understanding?
Physical Activity	Physical activity identified as important to community life?
	Goals plan for residential areas proximity to recreational areas?
	Goals include mixed use planning, a walkability plan, or biking plan? Goals target increasing children’s physical activity?
	Policies to expand the number of parks or recreational facilities?
	Policies to create joint use facilities for recreational purposes? Policies to expand any walking or bicycle trails? Policies that support “safe routes” to school?
Transportation	Goals target increasing public transportation access? Goals aim to reduce traffic related injuries and fatalities?
	Policies plan for sidewalks or “complete street” plans?
	Policies include transportation plans to reduce vehicle miles traveled?
	Policies aim to expand public transportation networks?
Air and Water	Goals include air quality? Goals aim to reduce asthma rates and other respiratory health illness? Goals include increasing water access?
	Policy requirements to improve air quality? Policies targeting asthma rates and other respiratory illness? Policies plan on increasing water access to rural communities?
Food and Nutrition	Goals encourage grocery stores, produce markets, or farmer’s markets? Goals aim to conserve or use local agricultural resources
	Policies include planning for grocery or food retailers? Policies plan for farmers markets? Policies target better local food distribution? Policies encourage community gardens or non-traditional food sources? Policies target restricting fast food or liquor store retailers?
Mental Health and Social Capital	Goals encourage expanding mental health services or awareness? Goals encourage aging in place? Goals plan for the social life of a county or city?
	Policies include the expansion of mental health facilities? Policies encourage people to age in place? Policies target a job housing balance?
Safety & Health Care Access	Goals target diabetes, obesity, asthma, or physical activity? Goals include accessibility goals and objectives for health care access? Goals plan healthcare access to low income or rural communities?
	Policies target chronic health conditions explicitly? Policies expand healthcare facilities in low income or rural areas? Policies encourage safe violence free communities?

Note. Modeled after *Note*. Created using information from: the APA *Healthy Planning Report* (2012) and the *How to Create and Implement Healthy General Plan Toolkit* (2012).

Chapter 4

GENERAL PLAN EVALUATION RESULTS

Planning is a dynamic and always changing process for cities and counties. The general plan is a blueprint, and a living document that changes as needs change. In this chapter, I will focus on the results of my evaluation of San Joaquin Valley general plans. I will first present the results of my case study selection and will conclude with a discussion of health in general plans in the San Joaquin Valley.

Case Study Selection Results

My evaluation only includes general plans that have a health element. One of the concerns expressed in the *How to Create and Implement Healthy General Plans Toolkit* (2012) is that health issues need to be included throughout the general plan and not concentrated in one health element. I only evaluated officially adopted general plans, no drafts: cities and counties will publish draft general plans for public viewing before adoption and might not update the fully adopted general plan to their websites. To make the evaluation reliable I only focused on general plans that had an adoption date.

I excluded general plans that are going through and update process and general plans that had a health element but have a publishing date prior to 2003. The final case study selection list based on the first four case study criteria includes Kings County, Merced County, Tulare County, the City of Ceres, the City of Madera, the City of Newman, the City of Ridgecrest, the City of Ripon, the City of Patterson, the City of Porterville, and the City of Tehachapi. I also excluded Merced County's plan because the document on the County's website was only a draft.

My evaluation contains no large cities as the City of Fresno and the City of Visalia are currently updating their general plans, and the City of Bakersfield and the City of Stockton do not make their general plans available online. During my preliminary review, I only identified Tulare County, the City of Madera, and the City of Tehachapi as having health language related to obesity, diabetes, nutrition, or physical activity (Appendix A, p 70). However, during my evaluation, I identified Tulare County, the City of Porterville, and the City of Ridgecrest. Kings County was the only jurisdiction that had an in depth discussion of obesity in its jurisdiction and included data.

Table 6: City and County Profiles

City or County	Population Census 2010	General Plan Update
Kings County	152, 082	2010
Tulare County	442, 179	2012
Madera (Madera County)	61, 416	2009
Newman (Stanislaus County)	10, 224	2007
Patterson (Stanislaus County)	20, 413	2010
Porterville (Tulare County)	54, 165	2008
Ridgecrest (Kern County)	14, 164	2008
Ripon (San Joaquin County)	14, 297	2006
Tehachapi Kern County	14, 414	2012

Note. Population statistics taken from quickfacts.census.gov.

Evaluation Results

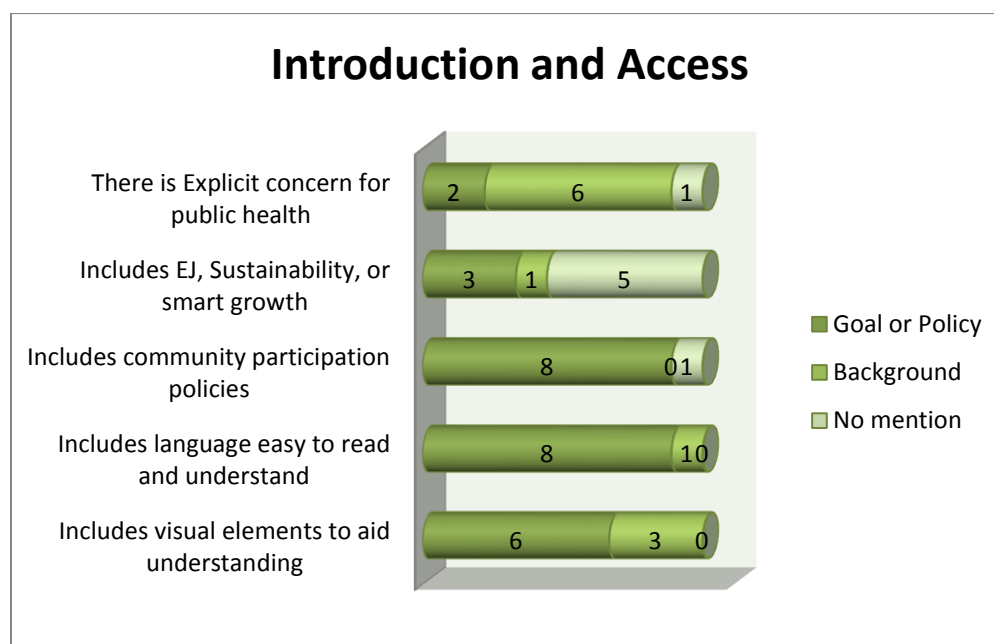
In this section, I examine and discuss my evaluation results. I first present my results by topic issue and then include a discussion of my research questions. The topic issues appear in this order: introduction and access, physical activity, transportation, air and water, food and nutrition, mental health and social capital, and safety and health care access.

Introduction and Access

Introduction

Introductory statements set the overall vision of local governments. From the literature and toolkit recommendations, introductory statements can signal public health to be an important feature of a community. In this category, I first evaluated whether general plans contained language that explicitly discussed public health, and secondly if introductory statements included any mention of health promoting policies such as environmental justice, sustainability, or smart growth,

Figure 2: Introduction and Access



Note. Created using information from city and county general plans. See Appendix A p. 70 and B p. 74.

I found that public health is included as an overall goal or in background information, with six out of nine general plans containing a public health or a community well being reference. For example, the City of Newman mentions health and safety as an

element and that the city will focus on creating a walkable community, but it does not explicitly mention public health. Kings County and the City of Madera were more explicit and made public health part of their vision and introductory statements. Kings County refers to community health and the built environment in its introductory statement. The City of Madera vision statement includes public health as a priority goal.

The *How to Create and Implement Healthy General Plans* toolkit (2012) suggests that public health should be included in general plan vision statements as it sets the rest of the plan to include public health as a priority in planning. Cities and counties seem to be moving towards the idea of including public health as a priority, and that could mean better health for the residents of the cities and counties. My evaluation indicates that even small cities are actively working on public health in the region.

Sustainability, Smart Growth, and Environmental Justice are making their way into general plans, the results of my evaluation showed that four out of nine cities had the topic as an explicit goal or background information. The City of Porterville was one of the most explicit in its focus on sustainability and environmental justice. The topics took a large part of its introductory and vision statement.

Access

Community involvement in planning is important to improving public health. Public officials take information from community members before deciding on the agenda the general plan sets. Communication is two-way as community members must be able to read and interpret general plan language. Because many San Joaquin Valley residents are poorly educated, general plans must be easy to read. As part of this

category, I evaluated whether general plans discussed community participation, secondly if the plans were easy to read and understand, and if they had any visual elements.

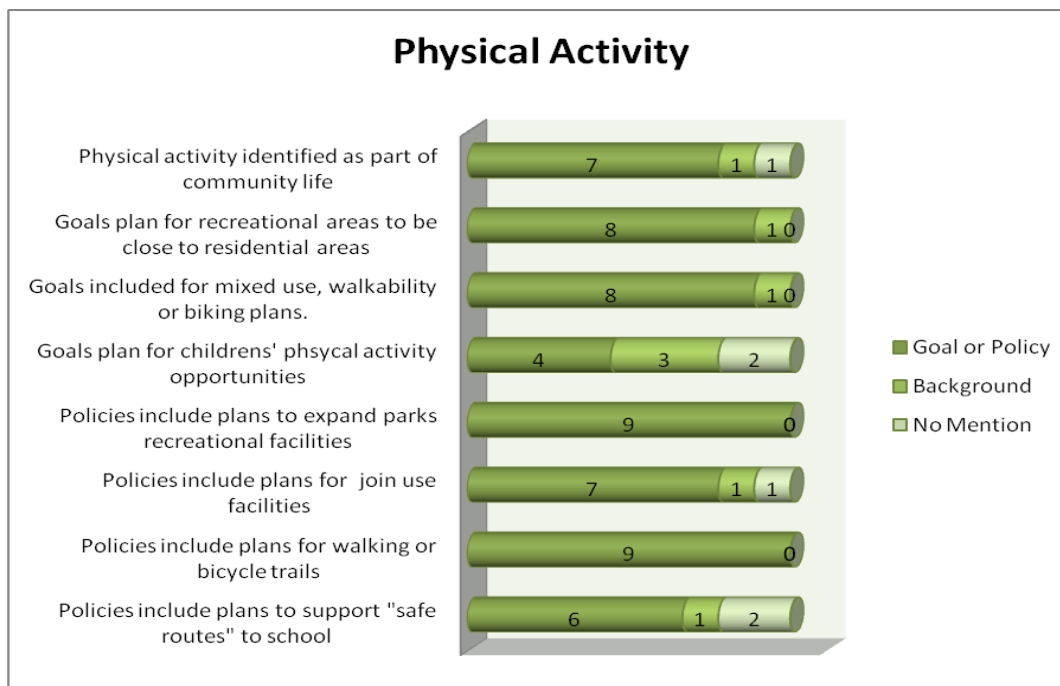
Eight out of nine jurisdictions included in depth discussions of community participation in their plans. They held various hearings with community groups and stakeholders before approving their general plans. They also had policies that encouraged community participation in planning. General plans all differ in their formats but include a list of terms. Tulare County was one of the most dense to read and had more technical language. Overall, I found that the general plans included understandable language and found that eight out of nine were very easy to read. I found that six out of nine general plans include a variety of visual elements, with the City of Tehachapi using visual elements the most because its general plan is highly focused on the design aspects of planning and is a form based general plan.

Physical Activity

Physical activity is what can help a person maintain a healthy lifestyle. People can go to private gyms but that is not always an affordable option for someone and exercising at home might not be the best option for people living under conditions that will not allow for indoor exercise. However, planning can encourage people to participate in physical activity through planning for physical activity opportunities such as parks, walking trails, biking trails, or joint use agreements that allow people to use physical activity centers located in public buildings such as schools. In this section, I

analyze San Joaquin Valley city and county inclusion of physical activity topics in their general plans.

Figure 3: Physical Activity



Note. Created using information from city and county general plans. See Appendix A p. 70 and B p. 74.

Goals

I first evaluated if the general plans identified physical activity as an important part of community life. I found that physical activity goals scored high, and eight out of nine plans discussed physical activity as a community goal. All nine general plans included goals related to planning for recreational areas near residential and commercial areas. Cities and counties all included either a goal to increase walkability, to create a biking plan, or to create mixed use zoning, which is supposed to create walking opportunities. Most general plans did not explicitly include increasing children's

physical opportunities. Only four out of nine had language related to children's physical activity. Three other general plans included the language as background information. The lack of health language related to children's physical activity could be because school districts can plan for children's physical activity. In addition, cities plan for parks depending on the neighborhood location and land availability.

Policies

All San Joaquin Valley general plans placed a strong emphasis on planning for physical activity (Figure 3). I found that all nine general plans included language in their policies that planned for the expansion of parks and recreational facilities. In addition, I noted inclusion of language related to maintaining their current parks.

San Joaquin Valley jurisdictions widely use joint use agreements. I found that seven out of nine jurisdictions include them in their general plans. The use of joint use agreements could be because it allows communities to share resources with other public or private groups, such as the opening of schoolyard fields for city run recreational activities.

All nine general plans evaluated included plans to expand trails. One of the most creative plans is to transform old abandoned railroad tracks that are part of the community into walking or bicycle trails. The City of Porterville explicitly expressed health benefits in its guiding policy C-G-9 which states that the City will promote the use of bicycles to alleviate vehicle traffic and improve public health.

I found safe routes to school language in six out of nine plans. The "Safe Routes" to school program encourages kids to walk and bike to school. There are two programs

available to fund the programs: the state funded program under AB 57 (Soto, 2007) available to cities and counties and the Federal program available to state, local, and regional agencies. Some policy examples are the City of Ridgecrest Policy C-6.12, which states that the City “shall cooperate with local schools to develop, maintain, an update a Safe Routes to School program.” The city put a side note that it was a “new policy” for the general plan. The City of Newman, although it does not mention safe routes explicitly, Policy PFS-10.8 states that the City will coordinate with the school district to facilitate private and public transportation, and pedestrian and bicycle routes, which promote safe access to school.

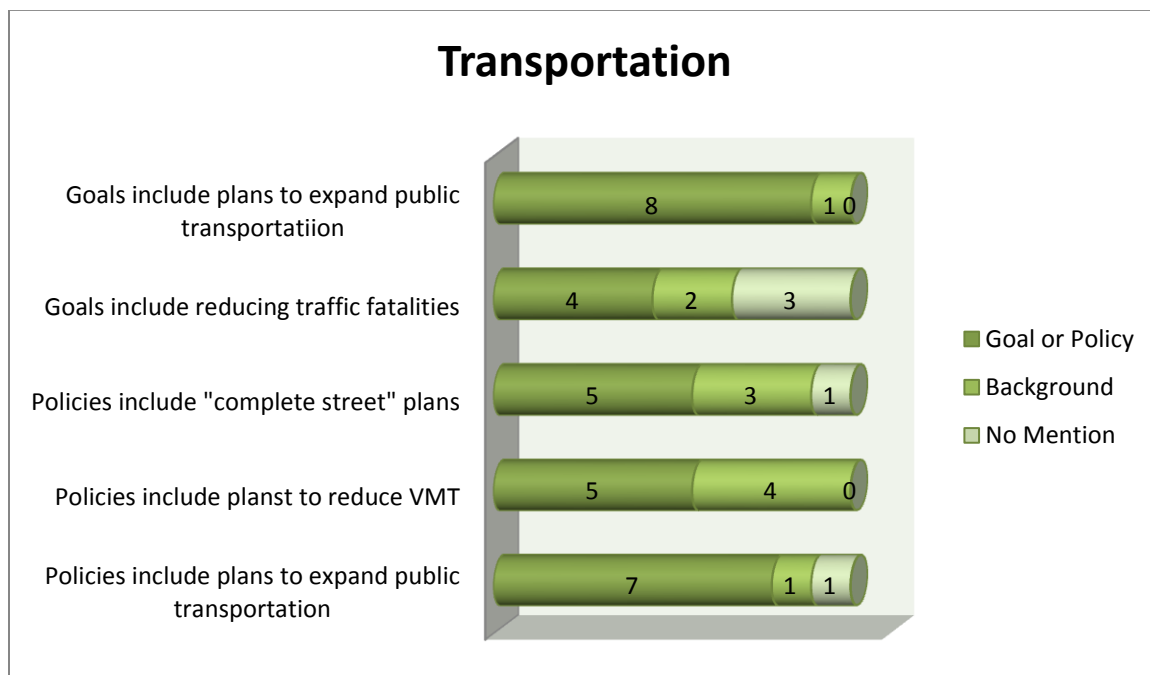
Overall, physical activity is present in every general plan. Kings County had one of the most comprehensive physical activity objectives and policies in multiple elements and explicitly promoted equity in the County’s policies. Its circulation element has plans to create county rails to trails and its health and safety elements includes objectives and policies to “maintain existing community parks and facilitate the establishment of physical activity areas within underserved community districts” (p. HS 46). The City of Ridgecrest was explicit as well in their policy open space and circulation element, policy 10.5, as it seeks to expand recreational opportunities for lower income families.

Transportation

In this section, I evaluate the inclusion of transportation goals and policies. Public transportation access is both environmentally friendly and allows low-income residents, students, and the elderly to reach their destinations. It is part of the circulation and

infrastructure of cities and counties. In this section, I evaluate access to transportation and environmental goals related to transportation.

Figure 4: Transportation



Note. Created using information from city and county general plans. See Appendix A p. 70 and B. p. 74

Goals

I first evaluated if San Joaquin Valley cities and counties include goals related to increasing transportation access. Eight out of nine jurisdictions explicitly included transportation access as a priority. Jurisdictions provide transportation services regionally and locally. My evaluation included some cities that have very small population and are unable to sustain a large transportation network. I only found that six

out of nine jurisdictions discussed decreasing traffic fatalities in their goals or background information.

Policies

Complete streets and multi-modal systems plan for transportation systems that accommodate pedestrian features such as sidewalks, bicycle lanes, and vehicles in roadways. In addition, they include tree canopies and marked crosswalks. Some policy samples include the City of Tehachapi, which includes “complete streets” as one of its overall goals in their background information, and included one policy for maintaining a bicycle network, and two policies requiring a pedestrian infrastructure consistent with their street plans. The City of Madera’s complete streets policy CI-31 and Action Item CI-31.1 require the city to create safe street standards.

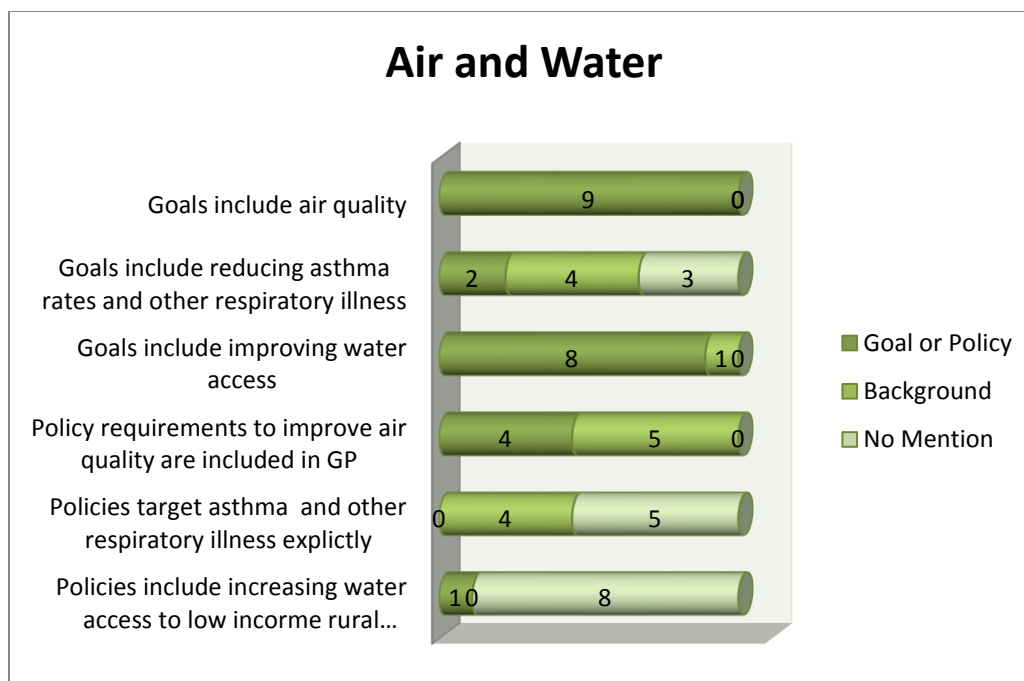
The continued reliance on the vehicle could be why my evaluation shows that half of the cities contained policies explicitly reducing vehicle miles traveled (VMT) and others discussed the issue more as a goal and in background information. Policies targeting the reduction of VMT included supporting transit to serve major work centers, park and ride lots, and encouraging rail into the area, and creating telecommuting opportunities for community residents by working with major employers in the region. Some had VMT as part of their circulation elements and other as part of their air quality goals and policies. Under SB 375, jurisdictions must plan for better air quality by coordinating their housing, land use, and transportation plans with the goal of decreasing VMT.

My evaluation of San Joaquin Valley general plans reflects regional transportation planning as eight out of the nine jurisdictions include plans to increase transportation access as needed. Smaller cities focus on dial a ride programs or van pool programs. There are regional transportation programs that they work with. For example, the City of Ripon receives all federal transit funds through the City of Modesto and in addition works very closely with Stanislaus County. The San Joaquin Council of Governments (GOG) prepared the circulation element draft for the city and the element included in its General Plan is a model of the draft. It is one of the most explicit examples of regional public transportation planning in the region. The City of Newman depends on Stanislaus County for transportation and the City of Porterville only operates seven bus lines that do not operate all seven day of the week. Overall, public transportation is a priority for San Joaquin Valley jurisdictions, but they plan within their fiscal and community needs.

Air and Water

As mentioned in my background report of the San Joaquin Valley, the area has high air pollution and some of its communities do not have access to safe drinking water. In this section, I evaluate air and water goals and policies. I first evaluated inclusion of air quality in general as a goal or objective in San Joaquin Valley City and County elements.

Figure 5: Air and Water



Note. Created using information from city and county general plans. See Appendix A p.70 and B.p. 74

Goals

All nine general plans include air quality goals. The City of Ripon, the City of Porterville, and the City of Madera included air quality in their open space and conservation elements. The City of Tehachapi and the City of Newman included air quality in their natural resource elements. The City of Ridgecrest was the only city that integrated the topic in its health and safety element. Kings County, Tulare County, and the City of Patterson all included separate air quality elements.

Cities in the San Joaquin Valley are addressing air quality goals, but not explicitly targeting asthma rates or chronic health conditions. However, they are including air

quality goals to improve public health. Tulare County and Kings County had the most public health oriented policies related to air quality. Air quality requires regional cooperation and can explain the higher inclusion of public health goals in county general plans.

All cities and counties in my evaluation included water access goals and infrastructure improvement goals. They include policies to conserve water in lakes and rivers, and monitoring public drinking water wells.

Policies

AB 170 Reyes, AB 32, and SB 375 all require local governments to plan for better air quality in the region. AB 170 is specific to the San Joaquin Valley region and requires jurisdictions to include an air quality amendment or an air quality element in their general plans.

Kings County, Tulare County, and the City of Patterson all included separate air quality elements and include a very detailed report covering all four AB 170 requirements. The City of Madera discusses all three policies in its Open Space and Conservation element and covers the requirements. However, the cities of Newman, Ripon, Porterville, Ridgecrest, and Tehachapi are all very brief in their discussion of air quality. However, most of them do report on their local air quality and include a set of goals and polices to implement in their jurisdictions. The City of Patterson is one of the smallest cities with only 20,413 residents but has one of the most comprehensive air quality elements, titled Air Resources and Climate Change. The element is not only

technical but includes creative ways to improve air quality. The City throughout its General Plan uses a globe to indicate sustainable air quality goals.

Air quality will help decrease chronic respiratory problems such as asthma but my evaluations showed that Kings County, Tulare County, Porterville, and Tehachapi include public health in their discussions of air quality. For example, Tulare's AQ-3 goals focuses on improving land use designs to improve air quality and minimize impact on human health. In addition, Kings County included policies that target educating the public on the effects of air pollution and public health.

The inclusion of water goals and objectives was very similar to air quality in that most cities included sustaining their water delivery system. Very few mentioned low-income or rural communities. However, Kings County and Tulare County have separate planning documents to deal with the unincorporated areas of the region. Most of the cities in my evaluation are small cities that depend on groundwater wells. It is not feasible for them to plan for large water delivery systems like COGs and counties. Porterville's OS-G-8 water policy will ensure adequate water quality and supply for the entire Porterville community. Lastly, the city includes a discussion of the many wells that are polluted and not usable in the City.

Food and Nutrition

Food and nutrition was one of the lowest scoring topics in my evaluation. Although some general plans did include community gardens and preserving agricultural resources, only a few included more controversial topics such as restricting access to fast

food or liquor stores. In this section, I will summarize my findings of food and nutrition goals and policies.

Figure 6: Food and Nutrition



Note. Created using information from city and county general plans. See Appendix Ap.70 and B.p. 74

Goals

Kings County, the City of Madera, and the City of Patterson all include goals to improve access to healthy food in grocery stores, markets, or farmers' markets.

Kings County and the City of Patterson included goals to conserve local agricultural resources. Kings County was unique in its emphasis of trying to preserve its agricultural land and connecting it, multiple times throughout its health and safety element, to creating healthier communities. HS Goal B1 promotes health and well-being by

encouraging, among other health related goals, readily available nutritious food sources. Policy B1.2.5 focuses on supporting strategies that capitalize on the mutual benefit of rural communities as food producers and urban economies as processors and consumers. Economically keeping their food local was beneficial for its community health and economy. The City of Madera includes Goal HS-2 that aims to have a healthy and fit population with access to healthy food. In my evaluation, I found that Kings County and the City of Patterson were the only two jurisdictions that discussed the local consumption of produce explicitly. Nutrition and food access in general plans is not a topic that is widely included in the case studies I selected.

Policies

The City of Patterson, the City of Madera, the City of Porterville and Kings County included policies that target farmers' market locations. As mentioned previously the City of Madera Policy 3.1 includes access to healthy food and Action item 3.2 encourages farmers' markets to be located in areas that do not have access to fresh produce. The City of Patterson NR2-7 includes farmers' market policies and a preservation of agricultural land policy; the policy encourages and supports local activities that will support their agricultural markets through farmers' markets and on site sale of produce that will support their local agriculture. Kings County Policy HS Policy B1.2.2 encourages farmers' markets within community districts.

Food distribution improves access to healthy food because local people consume local produce and it does not require traveling long distances. It improves healthy food

access for communities that do not have stores that provide local produce. The City of Madera included both a policy and an action item related to food access for low-income communities. Policy HS-3 states that the city should promote access to healthy, nutritious foods, particularly for segments of the community identified as having little access to such food. Action item HS-3.1 encourages the location of grocery stores in underserved areas, preferentially within walking distance of surrounding residential areas. It makes a note that it is also part of the land use element. Only the City of Patterson and Kings County have similar policies.

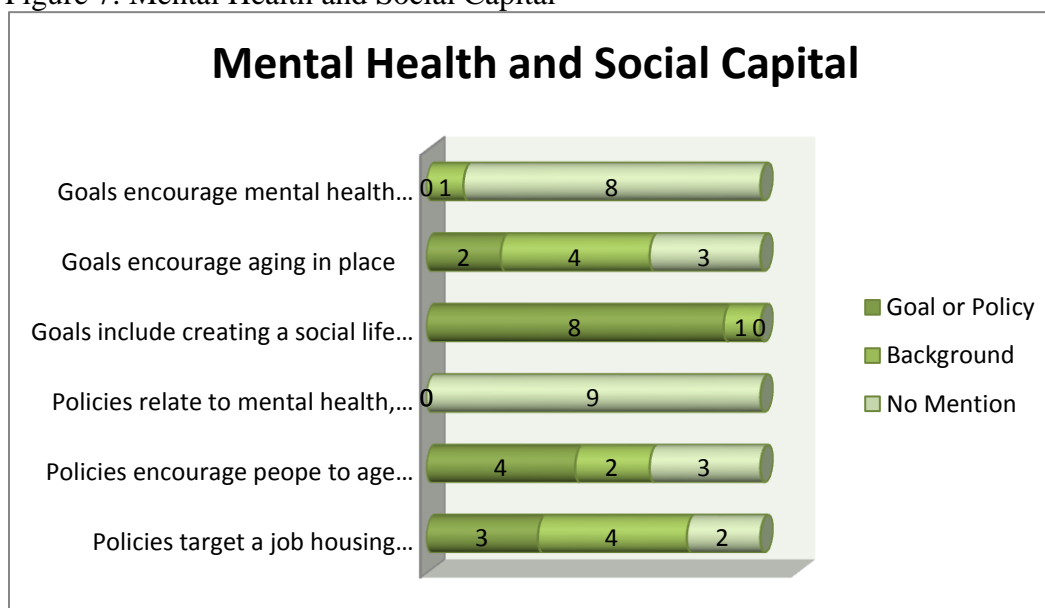
Community gardens were the preferred policy to support non-traditional food sources. Kings County, the City of Madera, the City of Patterson, and the City of Ridgecrest all included community gardens as part of their goals and policies. Gardens are less controversial and more likely easier to plan for since they become part of a city park or public community area.

Kings County was the only jurisdiction that had an explicit policy to “discourage the over concentration of fast food eateries, liquor and convenience stores in community district core areas” HS Policy B1.2.4. In Tehachapi’s economic development plan, policy EV21 affects the reduction of vehicle miles traveled and food access; it allows convenience retail, food and beverage, and personal services to be located in neighborhoods to reduce and eliminate trips as long as they are non-alcoholic.

Mental Health and Social Capital

Long term residents dedicated to the civic and economic health of the city or county can often improve the living conditions through neighborhood associations, community interest groups such as festival and community event organizers. In this section, I evaluate topics that can help residents maintain a healthy psychological well being throughout their lives in the community.

Figure 7: Mental Health and Social Capital



Note. Created using information from city and county general plans. See Appendix A p. 70 and B p. 74.

Goals

Out of the nine San Joaquin Valley Plans that I evaluated, I was not able to identify goals that discussed mental health. The City of Ridgecrest was one of the few to mention psychological health as an objective in its Open Space and Conservation element where it states, “the intent is to provide for the continued psychological and physical well being of citizens from every economic level, age group, or physical ability” (p.7-1).

Aging in place was only included as a goal in the City of Madera and City of Ridgecrest general plans. However, Kings County, Tulare County, the City of Madera and the City of Ridgecrest include aging in place policies. All nine general plans did include goals related to encouraging and supporting a social life for the community.

Most cities and counties did plan for the social life of all residents with eight out of nine including policies to create better social opportunities. The City of Tehachapi focused on building an arts and entertainment district for its residents and visitors. Other cities such as Madera focus on encouraging civic participation through City sponsored events.

Policies

Mental health was the least included, but it is not likely to be within the jurisdiction of planners. None of the cities or counties included planning for mental health services. Aging in place policies encourage planning that will allow people to remain members of the community for a long time, and they can include transportation expansion to neighborhoods with aging residents and social activities for the elderly, as well as including recreation facilities for their enjoyment. Policies for aging in place can take a variety of formats. Ridgecrest Land Use Policy (LU-2.11) encourage senior housing development near public transportation, commercial services, and health services. The City of Madera focuses on the design of the home and encourages design features such as wide hallways that would accommodate people as their mobility decreases in Policy SUS-18. Kings County HS Policy B1.1.5 includes complete streets and range of housing to support people aging in place.

Jobs housing policies explicitly appear in three out of nine general plans. The City of Patterson included policies that include a target ratio of jobs to housing balance, workplace alternative policies, and creating housing choices such as live work units. The City of Newman focuses on supporting development that will increase new jobs to the area. Tulare County included multiple policies. ED-2.4 focuses on attracting businesses that offer self-sufficiency wages and ED-2.8 targets its job housing ratio to be greater than one in areas planned for development.

Safety and Health Care Access

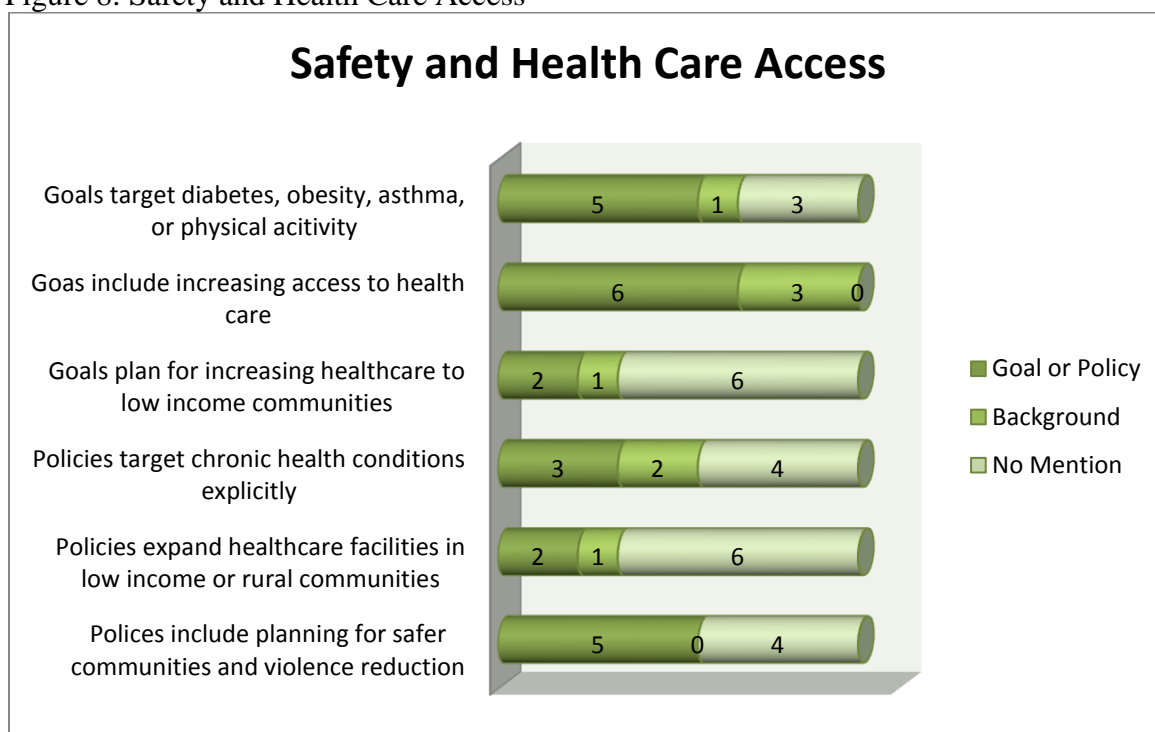
The primary reason why I decided to focus on the San Joaquin Valley is that it has some of the highest rates of chronic health conditions in California and the nation. I wanted to find how San Joaquin Valley Cities and Counties are dealing with their health challenges.

Goals

In my evaluation, I looked for the inclusion of obesity, physical activity, diabetes, or asthma. Physical activity was the most cited goal in the general plans. Kings County was the only jurisdiction that explicitly discussed all chronic health conditions of concern in the region and included policies targeting the problems. Section III of its Health and Safety element is the only element that includes a discussion of chronic health conditions such as diabetes and obesity. In addition, it discusses opportunities for exercise and healthy eating. The County addresses medical services offered within the County and location of rural medical services. Kings County has a detailed list of goals, objectives, and policies related to the chronic conditions of its community.

All cities and counties include access to health to be a goal or objective. It is a priority, but some are too small to maintain large healthcare centers and must work with regional medical providers. Kings County and the City of Patterson were the only two jurisdictions that explicitly discussed access to health care for low income communities as a goal or objective.

Figure 8: Safety and Health Care Access



Note. Created using information from city and county general plans. See Appendix A p.70 and B.p. 74

Policies

In my evaluation, I found that most general plan policies do not target chronic health conditions explicitly, but based on their goals, one can conclude that they are actively working on improving community health. As mentioned previously, Kings County was the most explicit and included all chronic health conditions.

Kings County and the City of Patterson were the only jurisdictions that included health care related policies for rural health care delivery. The County included three policies that focused on healthcare delivery to unincorporated and rural clinic services.

The majority of the jurisdictions included language for safe community planning and violence reduction. Kings County and the City of Madera included the policies in their health and safety element. Tulare County included the policy in its Public Facilities and Services element. The City of Madera was the most explicit and included three policies related to crime prevention. Policy HS-39 states the city encourages the use of Crime Prevention through Design Environmental (CPTED) principles. The CPTED principles are natural surveillance, territorial enforcement, natural access control, and target hardening. Natural surveillance maximizes the visibility of people in public spaces; territorial enforcement is done through defining property lines and distinguishing private from public spaces through landscape, pavement or gateway designs. Natural access control refers to designing streets, sidewalks and indicating they are public routes, and hardening targets includes using tools that prohibit entrances such as locks.

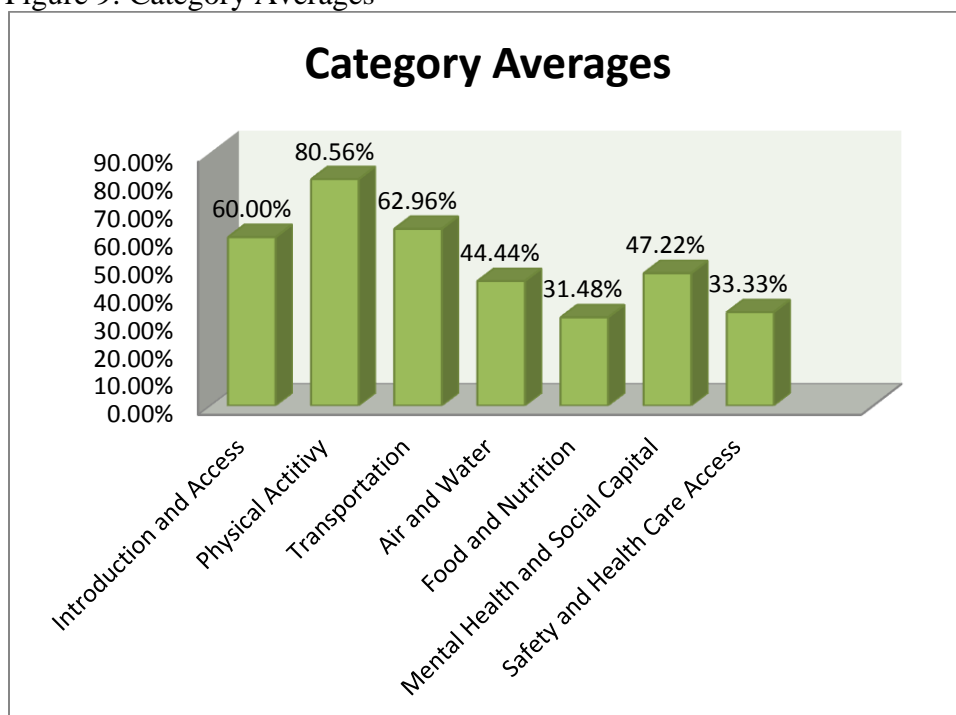
Conclusion

Through my evaluation, I found that cities and counties in the San Joaquin Valley that have a health element are including health issues throughout their general plans.

My evaluation results show that smaller cities in the San Joaquin Valley are including health in their general plans. However, this is a very small case study sample. The cities and counties in my evaluation have policies oriented towards creating better infrastructure that includes better transportation and better movement of people and

goods. For the most part, cities and counties work at a regional level to provide healthcare access, and that is reflected in the score averages.

Figure 9: Category Averages



Note. Created using information from city and county general plans. See Appendix A and B.

Physical activity was the highest health topic included in San Joaquin Valley general plans with a category average of 80.56 percent. The second highest category is transportation, with a 62.96 percent average. All general plans had a discussion of expanding parks, open spaces, walkability, and bicycle trails. Although mental health is not cited, social capital is a very important community feature for San Joaquin Valley jurisdictions and is reflected with a high average of 47.22 percent of inclusion in general plans.

They are more conservative in including policies for controversial issues such as discouraging fast food or liquor stores. Jurisdictions are interested in creating social opportunities for their residents that will improve residents' quality of life and increase revenues. In addition, cities and counties are planning for public transportation and health care within their economic and community means and needs.

Success Indicators

Overall, cities and counties had implementation plans or action plans to implement their health related policies. For example, Tulare County included plans to work with other stakeholders and to create a healthy community checklist for new residential, office, or public developments that included a list of standards. Other cities and counties such as Madera plan to continue existing programs such as their sidewalk program to increase walkability. The City of Patterson set a goal to achieve LEED Silver certification for all non-residential buildings.

Chapter 5

CONCLUSION

Summary

The San Joaquin Valley has some of the highest asthma, obesity, and diabetes rates in the nation. General plans are the blueprint for cities and counties in California as they envision and guide the physical environment of their respective jurisdictions. General plans guide the creation of the physical environments where people live, work, and socialize. The physical environment consists of the air people breathe, the water they drink, the sidewalks they walk on, and the amenities available to them. All of these combined can have an impact on the public health of an individual. To evaluate the general plans of San Joaquin Valley cities and counties, I created an evaluative framework using the APA's *Healthy Planning Report* (2012) and the *How to Create and Implement Healthy General Plans Toolkit* (2012).

Findings and Policy Implications

One of the arguments for integrating public health more explicitly in general plans is to increase awareness of public health issues throughout the community planning process. From the literature, Corburn (2004) argued that although walkability and sustainable policies promote health, actual health outcomes are a secondary or implicit discussion in the planning process. Through my evaluation, I found that most cities concentrate more on sustainable and smart growth topics that affect health but do not

explicitly discuss chronic health conditions. However, cities and counties I evaluated do include public health as an overall goal in their vision and throughout their general plans. An explanation for the high degree of physical activity and sustainability centered public health goals is the fact that the San Joaquin Valley has current regional efforts to integrate sustainability, smart growth, air and water goals into local city and county general plans through the San Joaquin Valley Blueprint program. Furthermore, there are legal mandates that require cities and counties to include health-affecting policies in their general plans. AB 170 (Reyes, 2003), AB 32 (Pavley, 2006), and SB 375 (Steinberg, 2008) all require cities and counties in the San Joaquin Valley to include policies in their general plans to improve air quality in the region. AB 170 is specific to the San Joaquin Valley and requires jurisdictions to amend their general plans and include air quality. SB 375 requires all jurisdictions in the state to reduce greenhouse gases by targeting vehicle emissions requiring the reduction of vehicle miles traveled (VMT). Five jurisdictions included a VMT policy and the other four included VMT goals as background information. Out of the San Joaquin Valley cities and counties that had available general plans online, 41 had air quality goals as an element or as part of another element in their general plans.

In my case studies, the most common public health related goals included in San Joaquin Valley general plans are mixed use, walkability, biking plans, and joint use facilities for increasing physical activity among community residents. As I mentioned previously, most of these goals are part of sustainability plans and are part of the San Joaquin Valley Blueprint goals.

Four out of nine jurisdictions that I evaluated had populations of 15,000 people or less. Most of them depend on regional transportation networks from neighboring cities and counties. They have smaller dial a ride program and vanpool programs to provide local services. All jurisdictions had plans to expand public transportation depending on their fiscal capacity, community needs, and partnerships with regional and neighboring transportation networks. The implementation of AB 375 might further expand transportation networks as it targets vehicle miles traveled. AB 1358 (Leno, 2008) requires jurisdictions to include complete street plans in their general plans. Half of the general plans I evaluated have adoption dates prior to 2008, but eight out of nine jurisdictions had a complete street policy or discussed complete streets as background information.

Nutrition and planning for better nutrition opportunities was one of the least included public health topics in general elements. The region has a high obesity rate, but its population also suffers from hunger at higher rates compared to the rest of California. People substitute foods of poor nutritional value when they are unable to afford foods of good nutritional value. San Joaquin Valley counties are some of the top agricultural food producers in the nation, yet their communities do not always have access to good foods. Only a few of my nine case studies discussed increasing nutritional opportunities explicitly. Four out of nine did include policies to support community gardens and farmers' markets, but only two had explicit policies for the support of local food production and consumption.

As I mentioned previously, four of my jurisdictions have very small populations. Small cities are unable to sustain large healthcare centers and therefore contained very few policies related to health care delivery. None had policies related to mental health services or programs. Overall San Joaquin Valley cities and counties concentrate on making their jurisdictions safe places to live. They are dedicated to planning for better infrastructure that will allow people to enjoy the environment that they live in more. In addition, cities and counties are including policies that use planning principles to create safer communities by reducing opportunities for violence or crime. The jurisdictions I evaluated are actively trying to create a sense of community and include plans to create places for people to shop locally and attend local events. Overall, regional efforts to create more sustainable communities are becoming part of general plans.

Environmental Justice

The three principles of Environmental Justice (EJ) are the environment, economy, and equity. The *General Plan Guidelines 2003* connect Environmental Justice to sustainable development at a local level and to “smart growth” at regional level. Sustainable development and “smart growth” both try to improve the environment and the economy of the San Joaquin Valley by improving its infrastructure, air, water, movement of goods, and people. Advocacy for the integration of public health in general plans is an equity centered idea because it tries to minimize the negative impacts created by poor infrastructure planning in the region and pollutants from the types of businesses located in the region. Only a few of my case studies addressed Environmental Justice

directly, but the City of Porterville addressed and dedicated time to describing the types of inequities that can take place in planning.

The first is procedural inequities, which might include staffing commissions that ignore the needs of low-income residents and requiring lower level of mitigations for projects that affect the low income. Geographic inequities include fewer public services to low income residents compared to higher income residents (Patterson, 2010, p. 4). Because the sample contained very small cities, my thesis was not able to measure geographic inequities in the region. Most jurisdictions had a high degree of community involvement in the creation of their general plans. I am unable to assess the degree of procedural equity that took place in the creation of city and county general plans because most plans did not include if outreach included inviting low-income residents to take part in the planning process. I can only conclude that general plans have a high degree of readability by including explanations for technical language and visual elements.

Limitations of Thesis

Results of my thesis are preliminary in nature because I was the only reviewer and it was a very small sample of jurisdictions. During my preliminary review of San Joaquin Valley general plans, I found that eight jurisdictions out of 61 cities and eight counties were currently updating their general plans. Twelve jurisdictions do not make their general plans available online. Thirty two other jurisdictions did not include the term “Health” in one of their general plan elements. My evaluation did not include large cities as they were all in the process of updating their general plans or did not make their

current general plans available online. It is missing a large urban context, and mostly contains very small to medium size cities in the San Joaquin Valley. In my study, I only evaluated cities and counties for the presence of public health issues and to what degree they were included. A more comprehensive evaluative tool is needed, that along with statistical data reports would provide a better picture of health in general plans in the San Joaquin Valley.

Future Research Opportunities

I only evaluated cities that had the term “health” in one of their elements; a more complete evaluation can compare cities and counties that contain health elements and compare them with cities and counties that do not. In addition, eight cities are currently updating their general plans. Future research should evaluate newly published general plans as they implement newer legal requirements and as advocates continue their efforts to integrate public health topics such as nutrition and chronic health conditions.

My research could have benefited from quantitative data and interviews with stakeholders and community leaders. From the literature, Silverstein et al. (2008) found that the commitment and leadership of county officials makes a difference in the implementation of physical activity policies. Interviews and a study of leadership among local government leaders in the San Joaquin Valley will further aid understanding of what type process takes place in the decision to include public health goals in general plans.

In addition, as I was doing my preliminary review of all San Joaquin Valley general plans I noticed that because local governments work with consulting firms to create general plans, some cities have twin like general plans. Another question to explore is how consultants working with city or county leaders affect the content of general plans.

OPR will be updating the *General Plan Guidelines* in 2013 and is considering including public health. Public health topics are not a currently a requirement and there are no state sponsored guidelines for the inclusion of health topics. However, like Environmental Justice, the inclusion of the topic in guidelines does not guarantee its inclusion in general plans. An alternative to including health in general plans can include the expansion of Health Impact Assessments (HIAs) or long-range health plans created in collaboration with the Department of Public Health. A collaborative effort can be more efficient in tracking health outcomes and success indicators of health policies in general plans.

Appendix A: San Joaquin Valley County and City General Plan Availability

City/County	General Plan Availability	Population	Last Update	Health Language	Health Element	Air Quality
<u>Fresno County</u>	Update in progress	930,450	2000	***	***	***
Clovis	Update in progress	95,631	1993	***	***	***
Coalinga	Online	13,380	2009	No	No	Safety, Air Quality, & Noise Element
Firebaugh	Online	7,549	2005	No	No	Conservation, Open Space, & Parks and Recreation Element
Fowler	Online	5,570	2004	No	No	---
Fresno	Update in progress	494,665	2002	***	***	***
Huron	No	6,754	---	---	---	---
Kerman	Online	13,544	2007	No	No	Resources
Kingsburg	No	11,382	---	---	---	---
Mendota	Online	11,014	2009	No	No	Open Space & Conservation Element
Orange Cove	No	9,078	2011	---	---	---
Parlier	No	14,494	---	---	---	---
Reedley	Update in progress	24,194	***	***	***	***
San Joaquin	No	3,600*	No	No	No	No
Sanger	Online	24,270	2003	No	No	No
Selma	No	23,219	---	---	---	---
<u>Kern County</u>	Yes	839,631	2009	No	No	Land Use, Open Space, & Conservation Element
Arvin	Update in progress	19,304	***	***	***	***

City/County	General Plan Availability	Population	Last Update	Health Language	Health Element	Air Quality
Bakersfield	No	347, 483	---	---	---	---
California City	No	14, 120	---	---	---	---
Delano	Update in progress	53, 041	***	***	***	***
Maricopa	No	1,154(CV)	---	---	---	---
McFarland	No	12, 707	---	---	---	---
Ridgecrest	Yes	27, 616	2008	No	Health & Safety	Health & Safety Element
Shafter	Yes	16, 988	2005	No	No	Environmental Management Program
Taft	No	9,327	---	---	---	---
Tehachapi	Yes	14, 414	2012	Yes	Civic Culture & Health	Natural Resources
Wasco	No	25, 545	---	---	---	--
<u>Kings County</u>	Yes	152, 082	2010	Yes	Health & Safety	Air Quality Element
Avenal	No	15, 505	---	---	---	---
Corcoran	No	24, 813	2007	No	No	Air Quality Element Online
Hanford	Yes	53, 967	2002	No	No	Hazards Management Plan Element
Lemoore	Yes	24, 531	2008	No	No	Open Space and Conservation Element
<u>Madera County</u>	No	150, 865	1995	No	No	Air Quality Element
Chowchilla	No	18, 720	2011	---	---	---
Madera	Yes	61, 416	2009	Yes	Health & Safety	Conservation Element
Merced	Yes	79, 958	2012	No	No	Sustainable Development Element
Atwater	Yes	28, 168	2000	No	No	Open Space and Conservation Element
Los Banos	Yes	35, 972	2009	No	No	Parks, Open Space, and Resources Element

City/County	General Plan Availability	Population	Last Update	Health Language	Health Element	Air Quality
<u>Merced County</u>	Yes	255, 793	2012	No	Health & safety	Air quality
Dos Palos	None	4, 950	---	---	---	--
Gustine	Yes	5, 520	2002	No	No	Open Space Element
Livingston	No	13,058	2008	---	---	---
<u>San Joaquin County</u>	Update in Progress	685, 306	1992	***	***	***
Escalon	Yes	7, 132	2005	No	No	Air Quality Element
Lathrop	Yes	18, 023	2004	No	No	Resource Management Element
Lodi	Yes	62, 134	2010	No	No	Conservation Element
Manteca	Yes	67, 096	2011	No	No	Air Quality Element
Ripon	Yes	14, 297	2006	No	Community Health & Safety	Open Space & Conservation Element
Stockton	No*	291, 707	2007	---	Health & Safety	---
Tracy	Yes	82, 922	2011	No	No	Air Quality Element
<u>Stanislaus County</u>	Yes	514, 453	2011	No	No	Conservation/Open Space Element
Ceres	Yes	45, 417	1997	No	Health & Safety	Agricultural & Natural Resources
Hughson	Yes	6, 640	2005	No	No	Conservation and Open Space Element
Modesto	Yes	201, 165	2008	No	No	Environmental Resources and Open Space Element
Newman	Yes	10, 224	2007	No	Health & Safety	Natural Resources Element
Oakdale	Yes*	20, 675	1993	No	Public Health & Safety	Noise, Air Quality & Safety Element
Patterson	Yes	20, 413	2010	No	Health & Safety	Air Resources & Climate Change Element
Riverbank	Yes	22, 678	2009	No	No	Air Quality Element
Turlock	Yes	68, 549	2012	No	No	Air Quality & Greenhouse Gases

City/County	General Plan Availability	Population	Last Update	Health Language	Health Element	Element
Waterford	Yes	8, 456	2006	No	No	Sustainable Development
<u>Tulare County</u>	Yes	442, 179	2012	No	Health & Safety Element	Air Quality Element
Dinuba	Yes	21, 453	2008	No	No	Open Space, Conservation, and Recreation Element
Exeter	Yes	10, 334	2003	No	No	No
Farmersville	Yes	10, 588	2002	No	No	Conservation, Open Space, Parks and Recreation Element
Lindsay	Yes	11, 768	1989	No	No	The Environmental Setting
Porterville	Yes	54, 165	2008	No	Public Health & Safety	Open Space & Conservation
Tulare	No	59, 278	2008	---	---	---
Visalia	Update in Progress	124, 442	***	***	***	***
Woodlake	Yes	7,279	2008	No	No	Recreation, Open Space, and Conservation Element

Note.*City of San Joaquin: Population located in City’s website because population not listed on quickfacts.census.gov website.

www.CityofSanJoaquin.org

*City of Maricopa: Population data from CenusViewer.com. City not listed on quickfacts.census.gov

*City of Stockton: General plan not available online. The City only makes available the background report and the name of elements included in their general plan. www.stocktongov.com/government/departments/communityDevelop/cdPlanGen.html

Oakdale: Update in progress.

Appendix B: Case Study Evaluation Scores

	Kings County	Tulare County	Madera	Newman	Patterson	Porterville	Ridgecrest	Ripon	Tehachapi
Introduction & Access									
Introduction includes explicit concern for public health	1	2	2	1	1	1	1	0	1
Introduction includes topics such as EJ, sustainability, or smart growth?	0	0	2	1	0	2	0	0	2
Policies target community participation?	2	2	2	2	2	2	2	2	0
Language used is easy to read and understand?	2	1	2	2	2	2	2	2	2
Visual elements aid understanding?	1	1	2	2	2	2	1	2	2
Physical Activity									
Physical activity identified as important to community life?	2	2	2	0	2	2	2	2	1
Goals plan for residential areas proximity to recreational areas?	1	2	2	2	2	2	1	2	2
Goals include mixed use planning, a walkability plan, or biking plan?	2	2	2	1	2	2	2	2	2
Goals plan for children’s physical activity opportunities?	0	1	2	2	1	2	2	1	0
Policies to expand the number of parks or recreational facilities?	2	2	2	2	2	2	2	2	2
Policies to create joint use facilities for recreational purposes?	0	2	2	2	2	2	2	1	2
Policies to expand any walking or bicycle trails?	2	2	2	2	2	2	2	2	2
Policies that support “safe routes” to school?	2	2	2	2	2	1	2	0	0
Transportation									
Goals target increasing public transportation access?	2	2	2	2	2	2	2	2	1
Goals aim to reduce traffic related injuries and fatalities?	2	1	1	0	2	0	2	2	0
Policies plan for sidewalks or “complete street” plans?	2	2	2	1	1	2	1	0	2
Policies include transportation plans to reduce vehicle miles traveled?	2	2	1	1	1	2	2	2	1
Policies aim to expand public transportation networks?	2	2	2	0	2	2	2	2	0

	Kings County	Tulare County	Madera	Newman	Patterson	Porterville	Ridgecrest	Ripon	Tehachapi
Policies encourage people to age in place?	2	2	2	1	0	1	2	0	0
Policies target a job housing balance?	1	2	2	1	2	1	1	0	0
Safety and Healthcare Access									
Goals target diabetes, obesity, asthma, or physical activity?	2	2	2	0	0	2	2	0	1
Goals include increasing access to health care?	2	2	1	2	2	2	1	1	2
Goals plan healthcare access to low income or rural communities?	2	0	0	0	2	1	0	0	0
Policies target chronic health conditions explicitly?	2	0	0	0	2	1	0	0	0
Policies expand healthcare facilities in low income or rural areas?	2	2	2	2	2	0	0	2	2
Policies encourage safe violence free communities?	2	2	2	0	2	0	0	2	0

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