

The City of Palm Springs: Developing a Plan for Smart, Sustainable Growth

Scott Saunders
Professor Robert Gottlieb
Urban and Environmental Policy Institute
Occidental College
Los Angeles, CA

Spring 2009

Table of Contents

1) Acknowledgements -----	1
2) Executive Summary -----	2
3) Personal Statement	
4) Introduction	
Basic Information -----	1
History -----	3
Native Population -----	4
Union Pacific Railroad -----	4
White Settlers -----	5
Transition to Tourism-----	7
National Parks, Public Land, Palm Springs Aerial Tramway -----	8
“Golf Capital of the World” -----	11
6) The Effects of Rapid Growth and Tourism in Palm Springs -----	13
The Dominance of Tourism -----	13
Water-Use -----	16
Air Quality -----	18
Endangered and Threatened Species -----	19
Urban Sprawl -----	21
Corporate Influence -----	22
Divided Community -----	23
Reliance on Tourism -----	25
7) Palm Springs General Plan -----	27
Recreation, Open Space, and Conservation -----	27
Parks and Recreation -----	28
Preservation and Conservation -----	29
Water Resources -----	31
Cultural and Historic Resources -----	32
Air Quality and Pollution -----	34
Land Use -----	37
Population and Employment Growth -----	37
Residential Land Use -----	38
Commercial Land Use -----	39
Mixed Land Use -----	40
Special Policy Areas -----	41
Employment Centers -----	42
Open Space -----	43
Community Design -----	45
8) Best Practices of Sustainability and Smart Growth -----	47
Increasing Water-Efficiency -----	48

Energy Conservation -----	51
Recycling and Solid Waste Reduction -----	52
Air Quality Improvement -----	55
Procurement -----	57
Golf Courses -----	59
Municipal Responsibility -----	64
9) Smart Growth: Downtown Palm Springs -----	66
Fundamental Downtown Problem -----	66
Conflicting Interest -----	68
Role of City Government -----	73
10) Policy Recommendations and Conclusion -----	78
Water and Energy -----	78
Air Quality -----	82
Procurement -----	83
Recycling and Solid Waste -----	84
Golf Courses -----	85
Department of Sustainability and Smart Growth -----	89
Conclusion -----	90
11) Bibliography	

Acknowledgements

I would like to thank Occidental College for providing me with an educational experience of paramount quality. Furthermore, I would like to thank the professors of the Urban and Environmental Policy Department, specifically Robert Gottlieb, Peter Dreier, and Mark Vallianatos, who have enlightened me in so many ways over the past three years. I would also like to thank Sylvia Chico for her help over the years and the wonderful job that she does for the Urban and Environmental Policy Institute.

I would like to acknowledge the City of Palm Springs, particularly Mayor Steve Pougnet, City Manager David Ready, and the former Director of Economic Development, all of whom went out of their way to provide me with guidance and access to the information necessary to complete this project.

Lastly, I want to thank my family and friends who have supported me in many ways throughout the course of this project and my entire college experience.

Executive Summary

I began this project with several goals in mind. First, I wanted to take a look at the development history of the City of Palm Springs, Ca. Second, I wanted to examine how the development that has occurred over time has affected the city in terms sustainability and the quality of life for residents. Third, I wanted to study other cities that have already begun practicing sustainability oriented policy. Last, I wanted to develop a sustainability framework for the Palm Springs.

The development history of the City of Palm Springs can be defined by the word ‘rapid.’ The first white settlers came to the region in the 1860s, during the construction of the Union Pacific Railroad. It wasn’t until the 1920s, however, that the city of Palm Springs would experience a boom. It was at this time that establishments including the Desert Inn, El Mirador, Del Taquitz, and Oasis resorts began to bring visitors from all over the world. Following this newfound reputation as a desert oasis, swimming pools, golf courses, night clubs, restaurants, and shopping malls began spreading the desert.

The effects of this rapid development are widespread. First of all, the City of Palm Springs has become a world-class resort town and has experienced a high level of economic growth due to this development. This has also resulted in a dependence on the tourism industry. In fact, the many of the restaurants, resorts, golf courses, and shops are seasonal. Apart from economics, the environment has suffered tremendously. Water, which was once thought of as an unlimited resource, is becoming scarcer and more expensive by the day. The quality of water in the region has decreased due to the landscaping and hardscaping techniques that have become popular in the city. The solid

waste created by the city is not restricted and continues to grow. Air quality has suffered because of various reasons including the regional carbon dioxide emission levels as well as the local particulate matter and dust pollution. Native species of plants and animals have become threatened or endangered and are continually forced out of their natural habitats as development continues. Golf courses, which contribute much to Palm Springs' reputation as a resort city, have not taken environmental impacts into account during their design, construction, or maintenance. Urban sprawl is another problem that Palm Springs has experienced. What is now the downtown district of Palm Springs, used to make up the entire city. During the recent decades, however, developers have turned away from downtown toward the outskirts of town where land is cheapest. Clearly, the City of Palm Springs failed, as many cities around the nation, to create a plan for development and growth.

Although many cities have experience similar problems, there are a several cities which have taken the environment into consideration and have began implementing sustainability oriented public policy. Cities such as Berkeley, Santa Monica, San Francisco, and many others have successfully combined the three ingredients of good public policy as a way to promote smart growth. First, they have creatively designed public policy aimed to protect their respective communities and the environment. Second, they have gained support for the movement towards sustainability through education and marketing. And third, they have enforced the policies that they have passed. With this, it is in the best interest of the City of Palm Springs to take a close look at the past experience and existing research that other cities have acquired over the years to establish its own name as a more sustainable city.

As many cities have already done, Palm Springs needs to create a department under the City Manager which is committed to smart growth and sustainability. Such a department would be dedicated to the creation and enforcement of environmentally friendly public policy. Necessary divisions of such a department may include, but are not limited to, Water Conservation, Energy Conservation, Recycling and Solid Waste Reduction, Marketing and Education, Irrigation and Urban Runoff, and Air Quality. The creation of a new department responsible for the research, implementation, marketing, and enforcement of sustainable programs and policies gives the City of Palm Springs the best chance of becoming a more sustainable city. The department will represent the Palm Springs' commitment to becoming more sustainable as well as the accountability that the Palm Springs is assuming in terms of becoming a more sustainable city.

Personal Statement

My personal connection to the Palm Springs is the fact that I was born and raised in the city. When I think of my childhood as a kid in Palm Springs, I think about playing in the desert with my brother and all of our neighborhood friends, I think of riding my bike through vast desert lots, and hiking into the mountain canyons where our mothers told us never to go. Unfortunately, due to the development that is occurring throughout the city, kids growing up in Palm Springs are slowly losing the opportunity to have the childhood that I once had.

I do remember the first time that I heard the word development. Until I was eight years old, the house that my family lived in was located adjacent to a huge desert lot where my brother, my friends, and I would always go out to play in. However, one day, my brother and I went to build a bicycle jump in the desert. As soon as we passed our property line into the desert, we noticed a new sign that had been staked into the ground in the center of the lot. Being young boys, my brother and I thought it would be fun to throw rocks at the sign, so we began launching every rock that we could get our hands on at the sign. After, what seemed like hours of throwing rocks, we heard our mother's two finger whistle which was our sign to come home for dinner. During dinner, our father told us that we were not to play in the desert next to our house anymore. My brother and I immediately objected to what my father had said, but he replied by saying that a new housing development was going in next door and that he did not want us to get hurt. My brother and I were furious and for the next week, we went to our desert everyday and through rocks at the developer's sign. Unfortunately, the protesting attempt by my

brother and I could not compete with the developer and so his project started a week later. We were able to play in our desert ever again.

Now, after nearly fifteen years, and a college degree in the field of Urban and Environmental Policy, I have a much better context for the situation that I faced when I was eight years old. I now know that the developer was not trying to keep my brother and I from playing in the desert, he was trying to make money. I now know that developments like the one that went in next to my house pose many more threats than just the one that it posed to my brother and me. I now know that something has to be done to protect the city, neighborhoods, the environment, and kids like me.

Throughout the course of this project, I have read many books and have learned much more about the City of Palm Springs than I ever knew existed. I also realize that this study covers many topics that could each be their own study. Throughout my time at Occidental College studying urban areas and the environment, I have come across entire papers and books that have been written on water conservation, solid waste reduction, downtown redevelopment, and nearly every other topic that I cover in this paper. With this said, the goal of this study was to provide the City of Palm Springs with an overview of the important aspects of sustainability and smart growth and I feel that this goal was achieved.

I

Palm Springs: Basic Information

The city of Palm Springs is situated in Riverside County just over 100 miles to the east of Los Angeles. Palm Springs is one of nine incorporated cities which are located in the Coachella Valley, which is sheltered by the San Jacinto Mountains to the west, the Santa Rosa Mountains to the north, and the Little San Bernardino Mountains to the east. The San Andreas Fault runs through the Coachella Valley, placing several of the local cities on different tectonic plates. Palm Springs sits on the Pacific Plate at an elevation of 440 feet and covers a 95 square mile area.¹ Due to the shelter from nearby mountains and the elevation, the climate of Palm Springs is relatively mild. Although, during the months of winter, Palm Springs may experience temperatures below freezing, for the most part the climate is hot and dry. During the months of summer, temperatures often reach above 110 degrees Fahrenheit and annual precipitation rarely exceeds six inches. Average seasonal temperatures are as follows:

January - average high 70 degrees, average low 40 degrees

April - average high 87 degrees; average low 52 degrees

July - average high 108 degrees; average low 73 degrees

October - average high 91 degrees; average low 57 degrees

¹ Onboard Informatics City Data, "Palm Springs, California." Onboard Informatics, <http://www.city-data.com/city/Palm-Springs-California.html>.

Although rain levels rarely exceed six inches per year, during the summer months, the Coachella Valley does experience brief, yet powerful thunderstorms which often result in flash floods.

Besides the dry and sometimes exhaustively hot climate of Palm Springs, there is an entirely different climate in Palm Springs. The Palm Springs Aerial Tramway is a tram service that runs from the base of the San Jacinto Mountains in Palm Springs to the top of the mountains in less than fifteen minutes. At the top of the tram lies the San Jacinto State Park where people have gone for decades to embark on hiking expeditions, camping trips, and other recreational activities. At the top of the summit, temperatures reach an average high of 85 degrees Fahrenheit during the summer and an average low of 11 degrees Fahrenheit during the winter.² Palm Springs is one of a few places in the world where people have the luxury of moving to a climate where there can be a difference of over 30 degrees in just fifteen minutes.

The population of Palm Springs fluctuates, depending on the time of year. Even though the number of year round citizens is below 50,000, at any given time, particularly during the tourist season, the number of people in the city can reach more than 100,000.³ During the tourist season, usually from mid - October until April, the city accommodates various festivals, conventions, parades, and other events; so, periodic influxes of people are not uncommon. Some popular local events include the Palm Springs International Film Festival, the Tour de Palm Springs cyclist race, the Palm Springs Biker Weekend, the Palm Springs Gay Pride Parade and Festival, and various professional and celebrity

² Palm Springs Aerial Tramway Tram Weather, "Tram Weather: Historical Averages." Palm Springs Aerial Tramway, <http://www.pstramway.com/cams-weather/weather-detail.html>.

³City of Palm Springs Visitors, "City Profile." City of Palm Springs, <http://www.ci.palm-springs.ca.us/index.aspx?page=30>.

golf tournaments.⁴ These various events appeal to a wide range of people in society and make significant contributions to the cultural, economic, and social diversity that exists in Palm Springs. Of the permanent local population measured in the year 2007, Palm Springs is comprised of 66.5% white, 23.7% Hispanic, 3.9% African-American, 2.5% Filipino, 1.6% American Indian, and 1.8% other. The estimated median household income in 2007 was \$48,771, which is an increase from \$35,973 measured in 2000, 15.1% of residents live with income below the poverty level, 6.2% of residents live with income below half of the poverty level, while the average household size is 2.0 people and the average family size is 2.88.⁵

The economy in Palm Springs is largely impacted by its tourist population. A study from 2002 showed that nearly half of all jobs in Palm Springs are tied to the tourist industry.⁶ In fact, during the summer months, when temperatures are too hot to attract many tourists, most of the hotels and restaurants temporarily close down until the tourism season starts up again.

History of Palm Springs

Today, Palm Springs is a place of significant cultural, social, and economic diversity, a place to vacation by the pool, a place to go golfing and play tennis, and a

⁴ Palm Springs Life Media, "Annual Events." Palm Springs Life Magazine, <http://www.palmspringslife.com/media/Palm-Springs-Life/Desert-Guide/Calendar-of-Events/Palm-Springs-Popular-Events/index.php>.

⁵ Onboard Informatics City Data, "Palm Springs, California." Onboard Informatics, <http://www.city-data.com/city/Palm-Springs-California.html>.

⁶ Onboard Informatics City Data, "Business Palm Springs, California." Onboard Informatics, <http://www.city-data.com/business/econ-Palm-Springs-California.html>.

place to see celebrities. But before Palm Springs became “The Playground for the Stars,” there was an entirely different Palm Springs that existed.⁷

According to studies done by anthropologists, the local Native Americans have lived in Palm Springs for over a thousand years. The Agua Caliente Indians used the local canyons in the San Jacinto Mountains as a source of shelter from weather and built their lives around the natural hot springs and streams that existed amidst the area’s desert landscape. They used native plants for food, clothing, and medicine and created bows and arrows to hunt native species of deer, bighorn sheep, rabbits, and other small animals. Eventually, after the Spanish came to the area, the natives were introduced to corn, melons, and other fruits and vegetables. They built irrigation ditches from the natural sources of water to open fields and began to grow crops and soon began raising cattle and horses.⁸

By 1862, the Bradshaw Trail from Los Angeles to Arizona (present day I-10) became a popular route for stage coaches and eventually the Union Pacific railroad. With the development of the railroad, white settlers began to stake land and build homes in the area. Many of the Agua Calientes were employed by Union Pacific during the construction of the railroad through the valley, while other Native Americans found work with white ranchers and farmers. As a result of this association with the new white settlers, many Indians fell victim to the small pox epidemic of 1862, and by 1884 there were only about 70 Native Americans living in Palm Springs.⁹

⁷ Palm Springs History, “History.” City of Palm Springs, <http://www.ci.palm-springs.ca.us/index.aspx?page=115>.

⁸ The Indian Canyons Ancestors, “Walk In The Footsteps of Our Ancestors.” The Indian Canyons, <http://www.theindiancanyons.com/Ancestors.html>.

⁹ Bogert, First 100 years

Jack Summers was Palm Springs' first white settler. He was hired to operate a stage stop that was built in Palm Springs along the Bradshaw Trail. In the 1860s, the federal government divided the land in the area into a checkerboard pattern of which Southern Pacific Railroad received odd-numbered sections while the even-numbered sections remained under the ownership of the government. Years later President U.S. Grant made an executive order giving the even numbered land parcels to the Agua Caliente in a process called allotment.¹⁰ Many Indians sold land to white settlers, including Agua Caliente member Pedro Chino who once sold 10 acres to two white men in 1880. Despite the fact that the land was owned by the Union Pacific, Chino figured that he had the right to sell the land that he was born on.¹¹ The two men who bought the land started the Palm City Water Company, which was fundamental in the formation of the new town.

The water company built nineteen miles of cement ditches to bring water from nearby sources of water. Farmers began to buy acreage from the Natives and experimented with planting a variety of crops to determine which ones would thrive in the irrigated desert soil. If crops were able to grow successfully, then desert farmers would be at a great advantage because of the early growing season in Palm Springs. When the weather was too cold in other places like Los Angeles to grow crops, the farmers in Palm Springs would be able to supply crops to those places in return for a large profit.

¹⁰ Agua Caliente History & Culture, "History & Culture: Overview." Agua Caliente Band of Cahuilla Indians, <http://www.aguacaliente.org/default.aspx?tabid=57#overview>.

¹¹ Frank M. Bogert, *Palm Springs: First Hundred Years* (Palm Springs: Palm Springs Heritage Associates, 1987), 56.

At the turn of the 20th century, with an increasing population of farmers, ranchers, and cowboys, the small town of Palm Springs was complete with a general store, post office, hotels with card rooms, and horse stables. A turning point in history for Palm Springs was when a woman named Nellie Coffman and her two sons bought a sanitarium in the new town. The sanitarium was set up to treat people suffering from asthma, arthritis, tuberculosis, and other illnesses. Around 1915, Nellie Coffman saw a viable business opportunity and decided to convert her sanatorium into a small resort, which she called the Desert Inn. She started off by specifying “no invalids” in her advertising, which put her business into a different class than it was in before. Her establishment was no longer a hospital; it was now a resort for which people paid to stay. With the help of her two sons, Coffman slowly added acreage to the parcel and by 1917 the Desert Inn stood on 35 acres in the heart of Palm Springs. Financed by Thomas O’Donnell, a wealthy oilman and winter resident of the Desert Inn, Coffman soon built a mission style building complete with a formal dining room, a number of guesthouses, and the city’s first swimming pool. Soon, the resort became a destination for people around the world.¹² Visitors included names such as Albert Einstein, Samuel Untermyer, Franklin D. Roosevelt, Herbert Hoover, Harry Truman, and John F. Kennedy, among many others.¹³

Similar resorts were established in Palm Springs, namely the El Mirador, Del Taquitz, and Oasis resort hotels. The resorts started off by serving the needs of various Hollywood studios, which used the Palm Springs area as a filming site for Arabia, North

¹² Jamie Pricer, “Our history: Innkeeper’s daughter pioneered city’s tourist season,” *The Desert Sun*, August 11, 2008, Local, B3.

¹³ Palm Springs Website, “The History of Palm Springs,” PalmSprings.com, <http://www.palmsprings.com/history/today.html>.

Africa, Mexico and other areas around the world. Many of the movie stars would stay at the resorts during the time that they were working and many of them enjoyed Palm Springs so much that they became regular guests even when they were not working. The El Mirador Hotel, for one, used the visiting Hollywood crowds to publicize its business. In the early 1930s, the owner of the El Mirador hired a cowboy named Frank Bogert, who owned one of the few cameras in town, to do publicity work for the hotel. Bogert began his work by taking pictures of every guest who stayed at the hotel lying by the pool and then sending those pictures to each guests' hometown newspapers. For instance, one guest from Minneapolis, Minnesota, came to the El Mirador Hotel in January, so Bogert took a picture of him lying by the pool and sent it to the local newspaper in Minneapolis where they posted a half page ad for the El Mirador Hotel in Palm Springs. The following month there were twenty reservations for people from Minneapolis.¹⁴ Not only did this marketing strategy have a profitable impact on the individual hotels, but the entire city began to reap major benefits. Restaurants, downtown shops, and night clubs began to open and soon Palm Springs became a target destination for people around the world. Golf courses and tennis clubs became a popular hang out, especially for the rich and famous. Palm Springs soon became known as the "Golf Capital of the World" and began hosting numerous professional and celebrity golf tournaments.¹⁵

New Paragraph: How did Palm Springs become incorporated?

¹⁴ Prickly Pears Documentary Frank Bogert (I need to get publication data for this source)

¹⁵ Palm Springs: The History, "The Valley Today," PalmSprings.com, <http://www.palmsprings.com/history/today.html>.

From the 1930s on, Palm Springs had effectively become known as a destination hotspot not only for movie stars and the rich and famous, but also families and vacationers. Tourism began providing jobs for the residents of Palm Springs and also caused many more permanent residents to settle down in Palm Springs due to the new high demand for jobs. Tourism facilitated the growth of Palm Springs by creating jobs, bringing in visitors, and bringing in money – all of which helped to raise the living standards of people living in the city.

By the year 2007, the year round population of Palm Springs had grown to above 46,000, the economy in Palm Springs had exploded, and more people were still coming to the “Desert Playground.” What started as a desert wasteland had slowly involved into a global attraction featuring excellent retail shopping, golf and tennis facilities, and a glamorous downtown.¹⁶

National Parks, Public Land, and Recreation

Aside from the glamorous persona of Palm Springs, there is a another, more rugged side of Palm Springs. Palm Springs serves as a major gateway to San Jacinto State Park, the Indian Canyons, and thousands of acres of desert land. For decades tourists have come to see the natural beauty and life that has existed in Palm Springs since time immemorial.

¹⁶ Bogert, *Palm Springs: First Hundred Years*, 263.

The Indian Canyons

The existence of the Indian Canyons is the primary reason for which the native residents of the area settled in Palm Springs in the first place. The water from the Indian Canyons provided the Agua Caliente Indians with a source of water, native plants, and wild animals that the Indians depended on for survival.¹⁷ The canyons are formed by the watersheds in the local San Jacinto Mountains and feed the various washes and creeks in Palm Springs. During the summer months, the canyons are nearly dry with only a trickle of visible water. During the winter and spring months, however, visitors of the canyons can witness roaring waterfalls and deep pools of water. The canyons are home to over 150 species of plants, Big Horn Sheep, mule deer, native birds and various other wild animals.

Today the Indian Canyons are used as a recreational area. Although, the canyons are relatively vacant during the dry season, at the first sign of rain during the wet season, hundreds of visitors begin to flock to the canyons daily. People go there to hike, swim, have a picnic, and admire the beautiful landscape. Some of the more extreme visitors have embarked on radical hiking expeditions through the canyons to the top of Mount San Jacinto, the mountain town of Idlewild, or even across the San Jacinto mountain range into the city of Hemet.

The Palm Springs Aerial Tramway

¹⁷ The Indian Canyons Ancestors, "Walk In The Footsteps of Our Ancestors." The Indian Canyons, <http://www.theindiancanyons.com/Ancestors.html>.

Another natural attraction of Palm Springs is the San Jacinto State Park located in the San Jacinto Mountains. People have been visiting this mountainous park only since the construction of the Palm Springs Aerial Tramway, which has taken people to its summit of more than 8,500 feet for more than 40 years. Since its establishment in 1963, the tramway has been considered to be one of California's outstanding tourist attractions and one of the greatest assets of the Palm Springs area. In just 12 minutes, passengers rise more than 6,000 feet on one of the most vertical ascents in the world and can go from winter sunbathing at 85 degrees in the city to cross country skiing at the top of the summit.¹⁸ During the wintertime, cross country skiers flood the hills of San Jacinto State Park and during the summertime, hikers, cyclist, and anyone else trying to escape from the desert heat take a trip to this mountainous getaway. Since its debut in 1963, the Palm Springs Aerial Tramway has safely transported more than 12 million people to the mountain peaks over Palm Springs.¹⁹

During the original construction of the Palm Springs Aerial Tramway, contractors used helicopters to put in place more than 600 tons of steel and over 27 miles of interlocking coil cable. Helicopters made more than 22,000 trips and carried more than five thousand tons of material up the steep cliffs of the San Jacinto Mountains. Then in 2000, after nearly four decades of operation, the tramway was renovated and passengers began riding in the world's largest rotating tram cars. Besides the installation of the new rotating tram cars, the renovation included a remodel of both the ground and summit stations. The renovation has added some more character to this long standing Palm Springs attraction and has received a great response from the public.

¹⁸ Bogert, *Palm Springs: First Hundred Years*, 227.

¹⁹ Palm Springs Aerial Tramway History, "History of the Tram," Palm Springs Aerial Tramway, <http://www.pstramway.com/history-tech/history-detail.asp>.

Golf

Without a doubt, golf has been the most attractive recreational facet of Palm Springs over the course of last 60 years. In 1928, the first public golf course was opened by the owner of the local El Mirador Hotel. The hotel owner, Prescott Stevens, also owned many acres of desert land as well as the Palm Springs Water Company, so the golf course was easy for him to build and maintain. Then around 1930, Thomas O'Donnell, a wealthy winter resident of Palm Springs and friend of Prescott Stevens, decided to build his own course. The exclusive course was only played by O'Donnell's invited guest until 1944 when O'Donnell's health forced him to stop golfing. At this time he invited 25 members to join and form the first country club in Palm Springs called the O'Donnell Golf Club. To this day the O'Donnell Golf Course remains an exclusive golf course played only by club members and their guests.²⁰

Today, Palm Springs is the home of more than ten public golf courses as well as many other private courses. The neighboring cities of Cathedral City, Indian Wells, Palm Desert, La Quinta, and Indio have all followed O'Donnell and Steven's suit. Today more than 100 golf courses have been built in the Palm Springs area.²¹ The Palm Springs area is also the home of many annual professional and celebrity golf tournaments including the Bob Hope Chrysler Classic, Frank Sinatra Countrywide Celebrity Golf Invitational, Kraft Nabisco Championship, and many other prominent golf events.

²⁰ The O'Donnell Golf Club History, "A History of O'Donnell Golf Club," The O'Donnell Golf Club, <http://www.odonnellgolfclub.com/palmspringshistory.html>.

²¹ Palm Springs Life Media, "Golf Courses," Palm Springs Life Magazine, <http://www.palmspringslife.com/media/Palm-Springs-Life/Golf-Guide/Annual-2006/Golf-Courses-of-the-Coachella-Valley/>.

The Forefront of Alternative Energy

Palm Springs has also become a world famous location for windmills since 1982 when the first modern windmills were built. Today, over 4,000 windmills are scattered across the San Gorgonio pass at the entrance of Palm Springs. The mountain passes that make up the outskirts of the city limits are a prime location for windmills as it is one of the windiest areas in the state. Average wind speeds clock in at 15-17 mph and provide “emission-free, natural energy” for the region.²² The actual windmills are owned by private investors including windmill manufacturers, firms, and individuals, who sell the energy to Southern California Edison.

Aside from the windmills, Palm Springs has done little in terms of sustainable practices. Since the establishment of the town, Palm Springs, similar to most cities around the United States, has done little to promote ideas related to sustainability and smart growth. Until now, the people of Palm Springs, residents and government alike, had not directly envisioned future development in relation to resource conservation and growth management policies. Instead, the city continued to evolve from the desert oasis it once was, into a small city complete with all of the great attributes of an urban area. With this, however, the city also began to experience the multitude of problems associated with rapid urban growth, as explored in the next section.

²² Jehan Seirafi, “Bet you didn’t know,” *The Desert Sun*, Desert Today Page D1, December 16, 2005.

II

The Effects of Rapid Development and Tourism Boom

The Dominance of Tourism

The City of Palm Springs is a much different place than it was during the days of Nellie Coffman's Desert Inn Resort. The acres upon acres of desert landscape that once filled the entire Coachella Valley have slowly disappeared. Over the years, residents of the city have seen the transition from the once true desert landscape into incorporated space that was built to meet the demand of visitors. Such developments include resorts, shopping malls, hotels, parks, parking lots, restaurants and so forth. Today, most people walking around Palm Springs probably do not even realize the fact that they are in a desert because when one thinks of a desert they typically think of sand, cacti, and tumbleweeds rather than luscious golf courses, swimming pools, shopping stores, and restaurants. This new "luscious desert" has begun to experience the effects of rapid growth and tourism. Although, Palm Springs owes much to the fact that tourism has triggered much growth for the city over the past century, tourism does present many threats to the city, its residents, and future visitors.

Generally speaking, basic economic theory can account for rapid growth in population, business, and tourism in terms of supply and demand. Simply put, as the demand for goods and services increases in an area, the supply of those goods and

services will undoubtedly increase in order to meet the demand.²³ For the City of Palm Springs, as the number of visitors to Palm Springs continued to increase, the needs of those visitors increased the demand for hotels, restaurants, shopping malls, and entertainment venues. Unfortunately, due to the fact that the city was not incorporated until 1938 and the early municipal government did not forecast such a boom in the tourism industry, the City of Palm Springs did not have a plan regarding development – it was just happening. Decades down the road, the city would soon find out that their failure to create a development plan and just letting growth happen would eventually lead to destructive practices.

“The power and reach of the market system have been truly remarkable and have often been underestimated in the past. But a reliance on the market system often does not produce better results, when results are judged in terms of human lives and freedoms and not in terms of commodity productions only. The role of public action can be very important not only for equity but for efficiency in securing human freedoms and dignity.”²⁴

The problem with relying on economic markets to determine the scale of economic activity is that markets often fail to incorporate the issue of environmental consequences. Market indicators do not incorporate the use of environmental variables

²³ Carley, Michael and Ian Christie, Managing Sustainable Development (London: Earthscan Publications, 2000) pp 29.

²⁴ Sen, Amartya, “What did you learn in the world today?” *American Behavioral Scientist*, volume 34, pp 530-48, 1991.

and therefore have no way of incorporating environmental issues in determining the optimal level of economic activity.²⁵

This is a problem that many cities across the United States are facing today. In the early years of many municipalities, there were no comprehensive plans for growth and as a result many of these areas began to face overpopulation, sprawl development, segregation, shortages of housing, overuse of natural resources, etc. Today, many cities have undermined those features of an area that were once the mainstay for growth in the first place. In the example of Moab, Utah, the city was founded and developed because of the beauty of the region and the accessibility of the neighboring national parks. People came from all over the United States to enjoy the scenery and natural landscape that once seemed indispensable in this small community. Over time, an increasing number of tourists began to alter the demands of the city and lead to the overdevelopment of the region. The tourist industry has begun to dominate the city and, as a result, has caused large scale hotels to be built and large scale commercial tourist attractions to flood the area with off-road motorists, cyclists, horses and other tourist attractions. Since this boom in the tourism industry, the natives of Moab have noticed a loss in their sense of place about their city. It is becoming increasingly difficult for the residents and tourists alike to enjoy the beauty and natural landscape of the region because of the development and commercialization that has occurred over time.²⁶ Clearly, the city of Moab failed to create comprehensive master plan that was successful in preserving the history and sense of place of the city.

²⁵ Carley, 29.

²⁶ A. Scott, "Smart Growth in Canyon Country: Challenges and Opportunities in Moab, Utah" (UEP Senior Comps, Occidental College, 2008).

As Moab and numerous cities across the United States, the City of Palm Springs did not establish a plan for development in its early years. This has resulted in economic overgrowth across the various markets in Palm Springs and eventually led to the current problems associated with rapid growth that the city is facing.

As the City of Palm Springs began to grow in popularity and more people began visiting the area, merchants, resort owners, and even homeowners began taking pride in the way that their city looked to visitors. People began using landscaping to provide more décor to their establishments and every new hotel featured multiple swimming pools and water features such as fountains and waterfalls to promote the city's reputation as a desert oasis. Without understanding the effects that this would have on the future, residents, business-owners, and city officials alike began using water as fast as it could be pumped out of the ground. The city began devoting public land toward parks with grass and non-native trees. Homeowners began planting lawns in their front yards and building swimming pools of their own. Public streets had become lined with grass and houses were covered with shrubbery. Golf courses began opening up all over the city. Palm Springs was becoming a more luscious desert by the day.

Water-Use

Water use has become a huge issue in Palm Springs. Similar to Palm Springs, water use in many cities across the United States has also been poorly managed, especially in cities of rapid growth where “water is often squandered” as if it were getting

cheaper by the gallon.²⁷ More specifically, Palm Springs is a desert and an aerial picture from 1950 would reveal just that. Such a picture would depict vast amounts of undisturbed desert floor and show only a small amount of development. On the other hand, an aerial picture taken today would look much different than that image from the 1950s. Instead of showing vast amounts of undisturbed desert floor, today's aerial images show vast amounts of hardscapes, golf courses, lawns, swimming pools and even man-made lakes. A stroll around a neighborhood in Palm Springs would be even more disturbing than the aerial images. Throughout the city one would not have to look very hard to find water waste during peak hours of the day including spewing sprinklers, people washing cars, large hoses carrying drain water from emptying swimming pools, and roaring street gutters from those actions.

The irresponsible use of water has many effects on the community and environment. Lawns, for one, are a huge contributor to the water induced problems that communities are facing across the United States. The difference between lawns and other more naturally occurring landscapes is that lawns are not naturally occurring and therefore require vast amounts of irrigation water, fertilizers, and pesticides in order to exist in the state that people desire. The negative effects of having a lawn compared to a more naturally occurring landscape are widespread. First off, surface runoff is much greater on lawns than other landscapes resulting in the loss of nutrients in drainage water and the contamination of nearby water supplies through the runoff of pesticide and fertilizer residue into those water supplies. It is commonly thought that plants are good for the environment because they absorb carbon dioxide from the air and release oxygen back into the air. With lawns, this is not the case. The use of pesticides and chemical

²⁷ O'Meara, Reinventing Cities for People and the Planet (Danvers: Worldwatch Institute, 1999) pp. 8.

fertilizers results in “carbon dioxide output greater than input.”²⁸ These effects further trigger more consequences of runoff related to lawns including a decrease in biological diversity, contamination of local water supplies, increase in solid waste production, and contamination of local agriculture, to name a few.

Air Quality

Air quality is another aspect of our environment that has been compromised through rapid development. The City of Palm Springs is guilty, along with cities across the United States, of practices contributing to global warming. Without the existence of a high number of manufacturing plants, which are major sources of air pollution in many cities, the City of Palm Springs’ major contributor to greenhouse gases is carbon dioxide pollution via gas-burning automobiles. Throughout the decades, more and more cars have come to Palm Springs and with “transportation (being) California’s largest source of carbon dioxide” emissions; the city should be doing as much as it can to reduce its contribution to carbon dioxide emissions. To this date, the City of Palm Springs has done nothing to promote practices that reduce greenhouse gas emissions.

Aside from the major issue of carbon dioxide emissions, Palm Springs faces many other issues related to air quality on a more local level. The major problematic issues that specifically affect the air quality in the City of Palm Springs are the issues of blowing sand, dust, and particulate matter. The presence of this type of air pollution in a community results in problems associated with visibility, respiratory illnesses, and

²⁸ F. Herbert Bormann, Redesigning the American Lawn, “Environmental Costs,” Yale University Press, 2001, pp. 67-70.

absences from school and work.²⁹ The majority of blowing sand, dust, and particulate matter related air pollution is a direct result of construction sites throughout the city. Although blowing sand and dust particles do exist naturally, construction sites increase the occurrence of this type of air pollution. In a natural landscape, native plants hold coarse soil and fine dust particles within their root systems, however construction sites are known for clearing desert land of coarse soil and all vegetation, thus leaving the fine soil particles on top of the desert floor. When the fine soil particles are on top of the soil, they are more easily lifted by wind and consequently released into the air. Since an obvious consequence of rapid development is an increase in construction, the City of Palm Springs has experienced an increase in the effects of this pollution over the years. Coupled with the periodic wind storms that Palm Springs experiences, these construction sites present huge problems to the surrounding neighborhoods and passersby in terms of blowing sand and particulate matter being released into the air.

Fortunately for Palm Springs, the city does not face much truck traffic, which is a large problem for many cities, especially those that are intersected by freeways. Although Interstate 10 runs past the outskirts of Palm Springs, the city center is miles from the freeway. The only truck traffic that does exist in Palm Springs is cement and construction trucks.

Endangered and Threatened Species

The City of Palm Springs and the surrounding area is the home of hundreds of native plant and animal species. The Native American population depended on these

²⁹ "Air Quality Element," General Plan City of Palm Springs, 2007. pp. 1

species as resources for survival, using them for food, clothing, utensils, medicine, and for many other purposes.³⁰ Today, the native population of plants and animals are much less appreciated. Unfortunately, many of those plant and animal species that once thrived in the Palm Springs area are now endangered. In fact, Palm Springs is the primary location of “two plant, three amphibian, two reptile, two bird, and one mammal species that are considered threatened or endangered by the federal government.”³¹ Threatened species include the Coachella Valley milk-vetch and the triple-ribbed milk vetch perennial flowers and the Coachella Valley Fringe-Toad Lizard. Endangered species include the Bell’s Vireo and Southwestern Flycatcher (birds), the Peninsular Bighorn sheep (mammal), the Desert Tortoise (reptile), the Arroyo Southwestern Toad, Mountain Yellow-legged Frog, and the California Red-legged Frog, which are endangered amphibian species.

There are many factors that have lead to the disappearance of many of these species – some natural and others not. Rapid development in the Palm Springs Area has disturbed the habitats of many of these species, resulting in their inability to reproduce.³² Another culprit of disturbing the habitats of wildlife is the tourism industry and such attractions as off-road bicycling and off-road vehicles. With the large amounts of desert landscape in the City of Palm Springs, there has always been a demand driven by recreation and also curiosity to explore these regions. Several businesses in Palm Springs specialize in renting out bicycles or motorized vehicles for these recreational purposes. Other businesses specialize in providing motorized tours of Palm Springs and the Indian

³⁰ The Indian Canyons Ancestors, “Walk In The Footsteps of Our Ancestors.” The Indian Canyons, <http://www.theindiancanyons.com/Ancestors.html>.

³¹ “Recreation, Open Space, & Conservation Element,” General Plan City of Palm Springs, 2007. pp. 23.

³² Benjamin Spillman, “Decision on critical habitat funding stirs anger,” The Desert Sun (Local B1), Monday, June 2, 2003.

Canyons. As development has done, these tourist attractions have also lead to the destruction of the habitats for many of the currently endangered or threatened species.

Urban Sprawl

The issue of urban sprawl is another effect of the rapid development in Palm Springs. With an increase in the demand for goods and services in the city, and the resulting growth in population and business, the city began to experience “the sprawling, low-density, fragmented, automobile-dependent development” that defines urban sprawl.³³ The town, which used to be centered at what is today the downtown street of Palm Canyon Drive, had now grown far beyond the boundaries of the downtown region. The vast desert fields were slowly becoming sites for new developments. Residential developers began buying property all over the area, particularly in areas furthest away from downtown where the land was cheapest. Entrepreneurs came into the city and began purchasing land downtown and even began to expand the city’s center by purchasing the properties adjacent to downtown as sites for business-oriented development. As more visitors began coming to Palm Springs, businesses began to flourish, prospective residents continued to move to the city in order to meet the demand for jobs, the demand for goods and services continued to rise and this cycle continued.

Linked to urban sprawl is the fact that growing cities across the United States have seen a steady decline in the health of their downtown communities since the 1920s. The small businesses and members of the middle class that once thrived within the

³³“Community Development,” United States General Accounting Office, 1999, <http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=gao&docid=f:rc99087.pdf>.

downtown environment have gradually moved to the outer regions or suburban edge of cities. Numerous factors have contributed to this decreasing trend in activity within the downtowns of cities, but the major problem that thwarts the maintenance of a thriving downtown is the cost of redevelopment. In 1973, a reporter asked Edward DeBartolo, the largest retail center developer in the country, what developers should do in terms of the high costs of downtown redevelopment and he replied, “Exactly what I’m doing: stay out in the country. That’s the new downtown.”³⁴

Corporate Influence

Over the past decades, developers like Edward DeBartolo have found the City of Palm Springs to be a goldmine of opportunity. With a good climate, high retirement population, and a heavy supply of tourists, Palm Springs has become known as a place where people like to vacation, dine, shop, and simply put – spend money. Developers have observed this attribute of the City of Palm Springs and have thus begun to target this once quaint town as a prospect for corporate developments to feed the high demand for goods and services on behalf of the residents and tourist population.

A developer named John Wessman has been battling with the city officials, residents, community organizations of the City of Palm Springs since 2001. In 2001, when Wessman became interested in the property known as the Desert Fashion Plaza, people wondered why someone would ever want to own such a property. The structure

³⁴ Bernard Frieden and Lynne Sagalyn, *Downtown, Inc. How America Rebuilds Cities* (Cambridge: MIT Press, 1989), pg 5

was described as beleaguered, run-down, vacant, and hopeless.³⁵ But Wessman saw something in the property that told him that it had some potential. The plot of land which the mall sat on was the real goldmine that Wessman saw in the Desert Fashion Plaza. The structure sat on thirteen acres in the heart of downtown Palm Springs and, in this context, Wessman envisioned a multifunctional complex including a retail shopping center and a large residential element. Wessman's initial plan included 200 condominiums and 250,000 square feet of retail space in a 10-12 story building.³⁶ As developers have done in small communities across the nation, this developer has held on tightly to his plan to develop this enormous complex and transform the quaint town of Palm Springs into another metropolis.

Divided Community

The City of Palm Springs has also begun to experience the effects of having multiple sectors of interest within the community. Palm Springs has evolved from having a primarily resident sector to having a resident sector, business sector, public sector, and now a tourist sector. Amongst these different interest groups, there are those people who have a vested interest in the city and those that do not. Those with a vested interest in the city include residents, some business owners, and local city officials, while those who typically do not have a vested interest in the city include primarily tourists as well as business owners. A "vested interest" in the city simply refers to the stake that that group of people holds in the city. For instance, since tourists do not have a vested interest in the

³⁵ Marie Leech, "Developer in Escrow with plaza owner Excel," *The Desert Sun*, June 7, 2001, Local B1.

³⁶ Nadia Villagran, "Developers unveil mall plans," *The Desert Sun*, October 5, 2001, A-Section A1.

City, they are more interested in their level of utility versus the concerns of the community in terms of tourist population, traffic, trash, recycling, water use, etc. Many business owners also fit into the category of lacking a vested interest in the community because of the fact that their business may rely on the level of utility of tourists.

For example, the City of Palm Springs hosts an annual event called the American Heat Palm Springs Motorcycle Weekend on the downtown strip. This event features live entertainment, retail vendors, and thousands of motorcycles and it advertises Palm Springs as “a great place to play” bounded by “lush” landscapes.³⁷ This example emphasizes the discrepancy between the various interest groups in the city. For one, many residents oppose the motorcycle weekend for several reasons including the loud noises associated with motorcycles, the mess that is left by such an event, and the associated biker gang members that come into the city to attend these events.³⁸ On the other hand, business owners are very supportive of the motorcycle weekend because of the high revenue that the event brings to their shops, restaurants, and businesses.³⁹ The city government is caught between these two groups because of the associated positive and negative aspects of the event. Although the government does understand that some residents oppose this biker event, the government does realize that businesses in the city are greatly benefited from such an event and have been inclined to allow the annual weekend event to continue.

Reliance on Tourism

³⁷ American Heat, “Palm Springs, Ca,” Road Shows, http://www.road-shows.com/american_heat.php.

³⁸ Stephanie Frith, “Fears of gang violence loom over biker event,” The Desert Sun Local B1, June 26, 2008.

³⁹ Stefanie Frith, “American Heat rolling this weekend,” The Desert Sun Local B1, October 9, 2008.

A problematic aspect of the growth in the tourism industry is that an overwhelming percentage of jobs in Palm Springs are tourism-related,⁴⁰ including entertainment, recreation, and accommodation jobs in hotels, traveler centers, museums, theatres, retail centers, golf courses, amusement parks, gambling institutions, historical sites, etc. This reliance on the tourism industry is potentially a huge negative factor because of the possibility of a decline in the tourism industry. In such a case, the City of Palm Springs would face a huge shock in terms of job loss and building vacancy. Many factors weigh on this issue of a decline in tourism, some of which may be considered short term effects and others of which may be considered long term effects. An example of a short term effect on tourism in Palm Springs is the recent boom and bust of gas prices. An increase in gas prices, as we have experienced during the recent past, could cause tourism in any city to slow down due to the associated increase of the cost of travel. An example of a long term effect of tourism is the problem of too much tourism. In order to understand the concept of having too much tourism, one must look at the reasons why people decided to start coming to Palm Springs in the first place – because it is a warm, quiet, and quaint town with beautiful landscapes and views. If the tourism industry in Palm Springs continues to grow, Palm Springs may change from the warm, quiet, and quaint town that it used to be into the corporate-oriented city that so many small towns have turned into during the past few decades. An increase in the number of visitors would trigger numerous effects including an increased demand for hotel space, retail, and entertainment. Such an increase in demand for services also results in an increase in the

⁴⁰ Onboard Informatics City Data, “Business Palm Springs, California.” Onboard Informatics, <http://www.city-data.com/business/econ-Palm-Springs-California.html>.

demand for space, which eventually will lead to the use of more and more of Palm Springs' beautiful landscape.

III

Palm Springs' General Plan

In this section, I will explore the various aspects of the General Plan of Palm Springs related to the issues of sustainability and smart growth. This section does not provide recommendations to the city, but instead is intended to identify those areas of the current General Plan that should be major points of focus during the near future and during the process of developing a plan for the city. Four elements of the current General Plan specifically reviewed include “Recreation, Open Space, and Conservation,” “Air Quality,” “Land Use,” and “Community Design.” As explored in sections IV, V, and VI, much of the existing information presented in these areas of the General Plan will need some major reconfiguration in order to make Palm Springs a more sustainable city.

Recreation, Open Space, and Conservation

There are three main subsections to this part of the General Plan including parks and recreation, natural resources, and cultural and historic resources. The City of Palm Springs has focused on these issues in the past and has consequently established many laudable practices as a municipality should. Generally speaking, however, these practices do not specifically compliment the issues of smart growth or sustainability.

Parks and Recreation

The first goal set out in this section is to “provide sufficient park, trail and recreational facilities that meet the diverse needs of residents and visitors.”⁴¹ As set forth in the General Plan, a park is a recreational area that meets the needs to children, adults, seniors, and people with disabilities. A park should be developed at a minimum rate of five acres of parkland per every 1,000 residents.⁴² A park should be distributed throughout the city limits in the most logical and efficient way, taking residential density and the location of schools into account. A park may not be restricted to the sole ownership of the City, but should be open to joint ownership (i.e. between the school district and the City) as a way to influence joint use, maintenance, and the development of school facilities, educational programs, and recreational programs around local parks.⁴³

Secondly, the city shall “ensure that parks are safe, well maintained, and provide a pleasant experience for residents and visitors.”⁴⁴ New and existing parks should feature the latest in playground equipment and should be developed in accordance with the Palm Springs Police Department. The community and local neighborhoods should be involved in the park development process including planning, building, and maintenance. Parks maintenance should incorporate efficient water and energy use and conservation principles in the design and retrofit of parks and other recreational facilities.

Local hiking, equestrian, and biking trails are another aspect of recreation that are prominent for the active local community in Palm Springs. Today, there are over eighty

⁴¹ “Recreation, Open Space, and Conservation Element,” Palm Springs General Plan (Palm Springs, Ca, 2007), 10.

⁴² This standard is set forth in the “Recreation, Open Space, and Conservation Element” of the General Plan.

⁴³ “Recreation, Open Space, and Conservation Element,” 11.

⁴⁴ Rochell Saunders, Former Member Parks & Recreation Commission, interview March 5, 2009.

miles of trails some of which were naturally created by wildlife and/or Native Americans centuries ago. With this, it has become a priority of the City to “provide a comprehensive trail network that is sensitive to the natural environment, wildlife and habitat, culture and history and recreational and circulation needs of residents.”⁴⁵ The access and maintenance of trails should be facilitated by a coordinated effort between city officials and the Agua Caliente Tribe. Trailheads should feature good quality restrooms, informational displays, posted rules and regulations, and parking. Trails should be free of the use of four-wheeled vehicles and off-highway vehicles, which should be restricted to specifically designated areas away from the preserved natural habitat, topography, and sensitive areas.

Preservation and Conservation

The climate and natural landscape of Palm Springs provide a unique ecosystem for wildlife and has provided natural habitats for an array of plants and animals, many of which are becoming endangered or distinct. Palm Springs is also home to a unique mineral base and is one of the top areas in the world in terms of wind energy resources. With this, the City of Palm Springs has the opportunity to be in the forefront of wildlife preservation and alternative resource production.

The first goal set forth in the General Plan for these issues is that the city should “support the preservation and protection of the biological resources, especially sensitive, rare, threatened, or endangered species, wildlife, or habitats.”⁴⁶ The City will participate

⁴⁵ “Recreation, Open Space, and Conservation Element,” 17.

⁴⁶ “Recreation, Open Space, and Conservation Element,” 27.

in as many local and regional efforts to study and protect local ecosystems and habitats of native species as possible. Wildlife and migratory corridors should be protected and enhanced. Citizens should be made aware, through education and advertisement, of the importance of the natural environment and the sensitivity of natural resources in Palm Springs.⁴⁷

The second goal of the General Plan has to deal with the conservation of resources and it states that the City will “employ the efficient, sustainable, and environmentally appropriate use and management of energy and mineral resources to ensure their availability for future generations.”⁴⁸ A priority in this respect is the continued development of wind energy sources in Palm Springs as well as development of cogeneration, solar, wind, and fuel cell technologies. The city also intends to promote the development of clean, sustainable, and alternative energy industries in the City and should also be encouraged in the construction of green buildings. Sustainable practices plan on being incorporated into many aspects of the city including land use, transportation demand management, and development. Renewable energy and green technology will be encouraged as a business development goal as a way to attract this type of business activity to Palm Springs. The city is planning on utilizing solar technologies wherever and whenever possible. Use of solar electric technology is going to be encouraged on an individual and community basis. The city plans on inducing the development of cogeneration facilities, clean natural gas, and ethanol fueled generating facilities to increase the reliability of energy production and service to the City and to encourage the creation of diversified sources for energy production. The city plans to

⁴⁷ “Recreation, Open Space, and Conservation Element,” 28.

⁴⁸ “Recreation, Open Space, and Conservation Element,” 36.

require golf courses to use tertiary-treated wastewater for landscape irrigation. Decrease water waste by controlling water pressure within irrigation systems to prevent water from reaching hardscapes and encourage the use of the proper soil in planters to increase water absorptions and reduce water waste.⁴⁹

Water Resources

Currently, the City of Palm Springs has done little to promote water conservation on a municipal level. One way is that municipal code does require landscaping projects to meet the requirements of the State of California Water Conservation in Landscaping Act. Another manner in which the city promotes water conservation is through a tiered system of water rates. Besides these efforts to conserve water, the City of Palm Springs has little to offer in terms of programs and policies promoting the conservation of water.

Despite the fact that there is little to show for current policies with regards to water conservation, the City of Palm Springs' General Plan does reference water conservation for the future. One goal in terms of water use, as set forth in its General Plan, is to “ensure an adequate supply of quality water is provided to the City.”⁵⁰ Within this goal, the city has established several plans of action. The first of these plans of action is for the City to establish and keep strong relationships with the Desert Water Agency, the Coachella Valley Water District, and the Mission Springs Water District – all of which are private water agencies that supply water to the cities within the Coachella Valley. The city also plans to encourage the responsible management and use of water

⁴⁹ “Recreation, Open Space, and Conservation Element,” 38.

⁵⁰ “Recreation, Open Space, and Conservation Element,” 47.

resources through appropriate water conservation measures, financial incentives, and regulations. The city intends to protect the quality of potable water by managing storm-water runoff, wellhead protections, septic tanks, and other popular sources of water contamination. It seeks to protect the natural environment from the negative externalities associated with development and ensures the natural supply of water to those regions remains unaffected. It seeks to encourage the preservation and management of floodplain areas that facilitate water percolation, replenish the natural aquifers, provide proper drainage, and subsequently prevent flood damage. The City of Palm Springs recognizes the need to work with neighboring cities on issues of water conservation, water supply, and water quality.

Cultural and Historic Resources

Palm Spring is home to many properties and buildings that are listed by the federal register, state register, and city register as historically significant. With this, as set forth in the General Plan, the City of Palm Springs plans to “support, encourage, and facilitate the preservation of significant archaeological, historic, and cultural resources in the community.”⁵¹

Properties under the national register include districts, sites, buildings, structures, and objects that are deemed significant in American history, architectures, archeology, engineering, and culture. As of now, Palm Springs has two archaeological districts that fall under the protection of the national register. Andreas Canyon and Tahquitz Canyon are two mountain-formed canyons that were used by the Native Americans as a source of

⁵¹ “Recreation, Open Space, and Conservation Element,” 50.

shelter from weather and built their lives around the natural hot springs and streams that existed within these canyons. The canyons are home to many indigenous plants and animals, notably the Peninsular Bighorn Sheep and the various species of native fan palms.⁵² Thus these canyons are also very important to the local Native American Culture, who also have spiritual respect for these regions which were the grounds on which their ancestors lived.

Properties under the state register are sites, buildings, or features that hold statewide significance and have cultural, historical, political, or other value to the states. Four sites have been noted as points of historical interest by the State of California including the Desert Inn, Palmdale railroad, the El Mirador Hotel, and Frances Stevens School – which is now a theatre.⁵³ These properties are deemed as properties of significance to the state and therefore shall be protected as such under both State and City laws.

For the City of Palm Springs, any area of the city containing a number of structures, natural features, or sites having historic, architectural, archaeological, cultural or aesthetic significance shall be designated as a historic site if it already has not been designated.⁵⁴ There are various sites that have been designated by the city as having historical significance. These historical sites include old houses (often houses belonging to famous people i.e. Elvis' honeymoon house), structures of architectural design that are unique to Palm Springs, landmarks such the Tramway Gas Station (built 1965) at the entrance of the city, and various other properties. These properties are not owned by the City, but owned by private parties. Although the City does not own these properties, the

⁵² "Recreation, Open Space, and Conservation Element," 51.

⁵³ "Recreation, Open Space, and Conservation Element," 51.

⁵⁴ Municipal Code Section 8.05.020 "Definitions"

City does have the right to restrict the use of these properties. For instance, owners of historical sites are not allowed to demolish any part of the property without specific city council permission.

Properties that are historic to the City of Palm Springs are managed by the Historic Sites and Preservation Board of Palm Springs. This board is composed purely of community members who are appointed by the city council. Members of the board may not be paid by the city on a consultant basis or as a staff member. The board meets bi-weekly along with one staff-member who acts as a medium of exchange between the board and the city council. The one staff-member who sits in on the board meetings is not allowed to vote on board motions or recommendations to the city council. The sole purpose of the board and other such boards and commissions is to provide the city council with recommendations and advice in relation to current historic sites or possible historic sites.⁵⁵

Air Quality and Pollution

Since air pollution does not recognize jurisdictional boundaries, the City of Palm Springs not only is affected by the contaminants released within city limits, but also those contaminants from other cities or parts of the region as well. With this, Palm Springs realizes the importance of working with regional agencies, commissions, boards, and city councils to implement programs that help maintain an acceptable level of air quality for the region and more importantly for the City of Palm Springs. Regional groups that the City is involved with include the South Coast Air Quality Management District

⁵⁵ Brian Strahl, Member of Historic Sights and Preservation Board, Interview March 7, 2009.

(SCAQMD) and the Southern California Association of Governments (SCAG).⁵⁶ The SCAQMD manages the southern coastal region as well as the inland empire including the South Coast Air Basin (SoCAB), which includes all of Orange County and the developed areas of Los Angeles, San Bernardino, and Riverside counties. Although much of the SoCAB is located up to 150 miles away from Palm Springs, the cities of Los Angeles, San Bernardino, and Riverside are the guiltiest contributors of air pollution to Palm Springs. Although these cities are far away from Palm Springs, the air pressure system created from the Pacific Ocean to Los Angeles, Riverside, San Bernardino, and Palm Springs sends the air pollution from Los Angeles, Riverside and San Bernardino to Palm Springs and the rest of the Coachella Valley.⁵⁷

Another common issue of air pollution in Palm Springs is dust and blowing sand. Although blowing sand and dust particles do exist naturally, construction sites increase the occurrence of this type of air pollution. With this, the city has begun to adopt measures to control windblown sand. The requirement of hedges, walls, and other barriers are used in construction projects to protect against the potential effects of wind. Construction sites use water to keep the dust particles from rising from the sand into the air. Vegetation or soil covers, such as mulch, are recommended to reduce the wind erosion of the lighter topsoil.⁵⁸

The two major sources of human induced air pollution in Palm Springs are ozone and particulate matter.⁵⁹ Ozone is a gaseous substance that occurs in the both the high atmosphere as well as the lower ground level atmosphere. In Palm Springs the major

⁵⁶ “Air Quality Element,” Palm Springs General Plan (Palm Springs, Ca, 2007), 1.

⁵⁷ “Air Quality Element,” 2.

⁵⁸ “Air Quality Element,” 6.

⁵⁹ “Air Quality Element,” 5.

issue of concern is the ground level ozone, which acts as a pollutant that poses a health risks to people and other biological organisms such as crops, trees, and other vegetation.⁶⁰ Urban smog is a direct product of ground level ozone pollution. A second source of human induced air pollution is particulate matter. Particulate matter is a mixture of very small particles of acids, organic chemicals, metals, and dust particles. These particulate matter particles vary in size, but only those particles that are 10 micrometers or smaller in diameter are considered dangerous because those particles are small enough to be inhaled through the nose and throat into the lungs. When the particles are in the lungs, serious health effects occur including damage to the heart. “Inhalable coarse particles” are between 2.5 micrometers and 10 micrometers in diameter and are caused by roadways and construction sites. “Fine particles” are 2.5 micrometers in diameter or smaller can generate the most serious health hazards and are formed from smoke, fuel emissions, and haze.⁶¹ In Palm Springs, the “inhalable coarse particles” are the most common because of the abundance of desert floor and a great number of open construction sites due to the constant development that has been occurring for decades.

Because of these threats to the air quality of Palm Springs, the City has established the following goals in its General Plan: 1) to “improve regional air quality to protect the health of the community”⁶² and 2) to “control suspended particulate matter emissions from human activity or from erosion of soil by wind.”⁶³ The first of the two goals identifies what the city plans to do in the future rather than what the city is actually implementing at the moment. As for the second goal, there are a few ordinances that are

⁶⁰ Air & Radiation, “Ozone,” United States Environmental Protection Agency, <http://www.epa.gov/ozone/>.

⁶¹ Air & Radiation, “Particulate Matter,” United States Environmental Protection Agency, <http://www.epa.gov/particles/>.

⁶² “Air Quality Element,” 7.

⁶³ “Air Quality Element,” 9.

intact that may help facilitate the attainment of the goal. For instance, the General Plan does state that no development shall be allowed to commence until a specialized “Fugitive Dust Control Plan” is submitted.⁶⁴ This ordinance is directed towards the managers of construction sites, which have been identified as a major source of dust pollution. The General Plan also states that the transport of dirt and/or soil through the city may not be permitted when wind speeds exceed 25 miles per hour.⁶⁵ So far, this is what the City of Palm Springs has done to improve air quality in the City.

Land Use

The “Land Use” element is considered to be the “backbone” of the General Plan.⁶⁶ This section addresses issues pertaining to the allocation, location, and density of land usage throughout the city. This segment of the General Plan provides city officials with guidance in the form of goals, policies, and actions for the future.

Population and Employment Growth

Under the current city limits, the city has figured that there is the potential of generating a maximum of just over 51,000 housing units. If we apply the average household size of 2.08 and 1.78 for single-family units and multi-family units respectively, the city’s population could ultimately reach about 95,000, at which point the carrying capacity of

⁶⁴ Effective June 2008, this ordinance (Section 8.50, Palm Springs Municipal Code) states that developers with open construction sites must provide ways to control dust pollution.

⁶⁵ “Air Quality Element,” 9.

⁶⁶ “Land Use Element,” Palm Springs General Plan (Palm Springs, Ca, 2007), 1.

the city's land would be reached. The current city employment is at approximately 32,500 jobs (as of the year 2000) and is expected to increase to over 55,000 jobs by the year 2030.⁶⁷

Residential Land Use

There are various land use categories used to classify infrastructure in a particular area or section of the city. These categories include the type, density, and intensity of development.⁶⁸ The city of Palm Springs has made it a priority to have a range of building types, sizes, and designs, not simply because it is possible, but because it is desirable. The density limit of both residential and nonresidential units changes on a parcel specific basis.

For residential units there are four classifications of density. Estate residential is defined as 0-2.0 dwelling units per acre and usually is designated for large, single family, custom homes. Very low density is defined as 2.1 – 4.0 dwelling units per acre and is the most common of the four classifications. Low density is defined as 4.1 – 6.0 dwellings per acre and represents the average single family residential area. Medium density is defined as 6.1-15.0 dwellings per acre and accommodates mobile homes, duplexes, condominiums, and multi-family dwellings. High density is defined as 15.1-30 dwelling units per acre and represents developments of duplexes, condominiums, and apartments. All residential developments are faced with certain restrictions when it comes to their

⁶⁷ "Land Use Element," 2.

⁶⁸ "Land Use Element," 3.

projects. It is stated in the General Plan that developments must “not create significant design, parking, or traffic impacts to the surrounding residential neighborhoods.”⁶⁹

Commercial Land Use

Commercial land use is subdivided into four categories as well. The Tourist Resort Commercial category is defined as 43 hotel rooms per acre. This land use typically is provided for large scale hotels, timeshares, and resorts. Within this category is a broad range of services including convenience, fitness, spa, retail, and entertainment, all of which seeks to serve the tourist clientele.⁷⁰ Large scale recreation and entertainment facilities including museums, theaters, water parks, and convention centers are also included in this designation, but should be designed in such a way that they are compatible with nearby neighborhoods and pre-existing nearby developments.

The Small Hotel Resort Commercial category is reserved for 15 hotel rooms per acre or 10 dwelling units per acre. This designation mostly applies to small scale resorts or hotels, which are considered as the unique defining characteristic to Palm Springs. For this reason it is intended that the small resort ambiance of these neighborhoods are preserved. Generic retail and commercial buildings are not allowed in this land category; only, those tied to the small-resorts or hotels are permitted.

The third subcategory is the Neighborhood/Community Commercial category and these areas provide small commercial shops to service the nearby residential neighborhoods. Common commercial vendors include dry cleaners, grocery stores,

⁶⁹ “Land Use Element,” 5.

⁷⁰ “Land Use Element,” 6.

bakeries, banks, bookstores, drugstores, barbershops, salons, and small scale restaurants. The final commercial category is Regional Commercial which is designated for large scale commercial uses that serve an area larger than the city of Palm Springs. Typical businesses in these areas include car dealerships, department stores, theaters, and large-scale restaurants. As with residential units, all commercial units must adhere to the rule that any new development must be compatible with the surrounding neighborhoods and pre-existing developments in terms of “site design, building scale, pathways and circulation design, and architectural treatment of structures.”⁷¹

Mixed Land Use

The third land use category is called Mixed Use and it refers to the regions of the city where both the commercial and residential categories are combined into a single classification. The Mixed Use category is further divided into two classifications. The first classification is known as the Central Business District. This classification exclusively exists in the downtown region of the city and allows for a mix of commercial, residential, and office uses. Although there are other regions of the city that allow for a mixed land use, the Central Business District allows these different types of development at a much higher concentration, density, and intensity than in other areas of the city.

The Central Business District is restricted to 21-30 dwelling units per acre and serves as the community and cultural core of the city. In this area there are theatres, museums, retail shops, and other entertainment venues as well as service providers such

⁷¹ “Land Use Element,” 6.

as grocery stores, hardware stores, pharmacies, and convenience shops.⁷² The second classification of Mixed Use is known as Multi-Use and includes professional offices, service businesses, restaurants, daycare centers, retail shops and residential units of up to 15 per acre.⁷³

Special Policy Areas

The locations that are designated as Special Policy Areas are areas that have been classified by having either environmental or aesthetic importance to the city. Primarily, the environmental aspect of these Special Policy Areas has to do with the endangered species that live in the Palm Springs area such as the Fringe-Toed Lizard, Desert Slender Salamander, and the Peninsular Bighorn Sheep.⁷⁴ The aesthetic aspect of these Special Policy Areas primarily refers to the view of the local San Jacinto Mountains. The city has incorporated this policy into the General Plan as a way to keep development, particularly hillside development, from obstructing the natural landscape of the region. For this reason, the development density of these Special Policy Areas has been limited to one dwelling unit per forty acres. Applications for development beyond this scope may be considered with the submittal of a Specific Plan, which addresses the environmental and aesthetic issues at hand.

Under all circumstances, developments within these regions must adhere to the Environmentally Sensitive Development Areas Specific Plan Ordinance (ESA-SP). The

⁷² “Land Use Element,” 7.

⁷³ “Land Use Element,” 7.

⁷⁴ Palm Springs – South Coast Resource Area, “Notable wildlife found in BLM’s Palm Springs-South Coast Resource Area,” Bureau of Land Management, http://www.blm.gov/ca/st/en/prog/wildlife/watchable/wf_palmwild.html. (also good for appendix)

ESA-SP has four sections describing the policy that the City of Palm Springs has adopted. First, development in the impacted zones shall preserve the open, rural character of these areas while allowing development of ranchettes and clustered single and multiple family or resort projects. Second, the purpose of the zone is to facilitate the preservation of open space through the creation of implementation of development review considerations that will ensure the evaluation of the suitability of the land for development in a manner which would preserve the character of the land. Third, a specific plan, allowing only sensitive and appropriate uses, densities, distributions, and design standards, is required for each development. Fourth, the provisions of the ESA-SP shall supersede any conflicting provisions of the Palm Springs Zoning Code.⁷⁵

Employment Centers

The General Plan refers to three categories of employment centers: office, industrial, and regional business. The office employment centers allows for the development of offices such as medical, executive, administrative, clerical, and small private offices. Retail is limited in this district to uses that directly serve the aforementioned office operations. Examples of permitted retail include, but are not limited to restaurants, office supply stores, and pharmacies. The industrial employment centers typically include light factories, laboratories, industrial services, auto-repair, and research/development parks.⁷⁶ Retail and office use is only allowed in an industrial employment center as a supplementary use to the preexisting businesses. Because of the

⁷⁵ Palm Springs Municipal Code, "Provisions," <http://www.qcode.us/codes/palmsprings/>.

⁷⁶ "Land Use Element," 8.

city's appearance as a premier resort community, there is not an abundance of industrial employment in Palm Springs. The Regional Business Center of the city refers to a single area which is at the outskirts of the city limits. This Regional Business Center area is intended to accommodate a wide variety of business types and is intended for businesses that serve constituents and visitors beyond the boundaries of the Palm Springs city limits. By design, this area is located right off of Interstate 10, providing easy access for those people coming from outside of Palm Springs. In this area of the city, there is much undeveloped land, which leaves room for any potential additional development over time depending on the demand of the business market.

Open Space

Open Space areas are divided into five subcategories. The first category is called Open Space – Conservation. These areas are designed for sloping areas of scenic beauty (i.e. hillsides) and natural landforms, such as alluvial fans. The General Plans states that these areas should be preserved in order to maintain the City's unique character.⁷⁷ Development in these conservation areas are limited to a maximum of one dwelling unit per 20 acres and is predominantly applied to the vast, non-mountainous open space areas of the city.

The second category is called Open Space – Mountain. This classification was established because of the close proximity of the local mountains, with the city government assuming the responsibility of protecting the beauty of this natural landscape.

⁷⁷ "Land Use Element," 10.

Development density within the mountain areas may not exceed one dwelling per 40 acres.

Third is the Open-Space Desert category which is limited to one dwelling unit per ten acres. This category was established in order to protect “natural, scenic, and wildlife resources unique to Palm Springs,” and to designate areas where limited development is sought as a means of protecting people and property from natural hazards.⁷⁸ Such an area might be the site of a development near or within bare desert floor where blowing sand could damage property or harm people.

The fourth classification is the Open-Space Parks/Recreation category which includes all local parks, community centers, golf courses, and any other recreational facility. There is no residential or commercial development permitted in these designations with the exception of restrooms, small offices, or recreation-related structures.

The fifth category is Open-Space Water and is reserved for flood control or drainage facilities only. No development is allowed in this designation because of the hazards that flooding poses to people and property. Many areas throughout the city fall within the Federal Emergency Management Agency’s flood map 100-year flood zone and may be subject to flash flooding in the case of what has been defined as a 100-year flood.⁷⁹

Community Design

⁷⁸ “Land Use Element,” 11.

⁷⁹ “Land Use Element,” 11.

The community design section of the General Plan has to deal with the vision of the city. Over time, Palm Springs has become the paramount city among all other cities in the Coachella Valley. In fact tourist will often say that they are going to Palm Springs, when in actuality they are going to Palm Desert, Rancho Mirage, or Indio. This is because Palm Springs has established a world famous name as a premier desert resort community. With this, the area continues to attract visitors from around the world and also continues to attract year-round residents to permanently move to the area. There are many reasons for why this has occurred and some of those reasons are based on its natural location. The desert climate and mountainous views put Palm Springs in an attractive location compared to many other places around the world. Besides the natural reasons for why people came to Palm Springs in the first place, there are the man-made reasons as well. Notably, the “village character, eclectic architecture, attractive streetscapes, and well-defined neighborhoods” have helped to mold Palm Springs into that small town that everyone loves to visit.⁸⁰ The General Plan states that it is the responsibility of the city government to take the steps necessary to protect and continue to enhance Palm Springs’ identity as such a place and this is what the Community Design section of the General Plan refers to.

The city has always been interested in urban design since its beginning. In fact, there was an Architectural Advisory Committee created in 1967, less than 30 years after the city’s incorporation. This committee had three basic duties. The committee was responsible for determining whether a proposed development was going to be a good fit for its occupants. It was responsible for determining whether the development was compatible with the character of surrounding developments. And lastly, the committee

⁸⁰ “Community Design Element,” Palm Springs General Plan (Palm Springs, Ca, 2007) 1.

was responsible for determining whether the development would be visually pleasing to the rest of the residents, tourists, and passersby in terms of design, texture, materials, and colors.⁸¹

Since the early days, the City's role in community design has not changed much. The Planning Commission still uses many of the same guidelines as the Architectural Advisory Committee used over 40 years ago. The most recent advancement by the city in terms of community design was the decision to take on the task of establishing "the city as a leader in energy efficient and environmentally sustainable development and planning practices."⁸² In the near future, the city plans on developing a green building ordinance, participating in the Community Energy Efficiency Program (CEEP), and adopting Leadership in Energy and Environmental Design (LEED) design standards for all new public buildings. Although the city has not made any formal changes yet, the fact that the city government has recognized the need to take on the task of becoming a more sustainable city is a huge step.

⁸¹ "Community Design Element," 1.

⁸² "Community Design Element," 62.

IV

Best Practices

Many cities across the United States have already started on their own paths toward sustainability. Some cities have found their policies and actions to be successful, while others have found that their efforts have fallen short of success. California cities such as Santa Monica, Berkeley, Pasadena, and many others have already completed years of research in the areas of sustainability and smart growth and they have already developed comprehensive plans including goals and the necessary actions or policies needed to meet those goals. With this, it is in the best interest of the City of Palm Springs to take a close look at the past experience and existing research that other cities have acquired over the years.

This section will take a look at some of the actions of those cities that provide lessons for Palm Springs in terms of sustainable public policy and smart growth. Additionally, due to the multitude of golf courses in Palm Springs, this section will explore actions taken by country clubs, developers, cities, and even countries in terms of creating more sustainable golf courses. Granted that an abundance of action has been taken by cities across the United States in an attempt to become more sustainable, the best practices examined in this study are focused on those policies that could specifically benefit Palm Springs.

Increasing Water-Efficiency

The City of Berkeley has developed several water saving strategies in terms of water use in public spaces such as parks. Since the majority of Berkeley's public water use went toward the irrigation of parks, the city decided to implement several water saving practices. The first change was to delay the time of irrigation and to reduce the number of watering days at each park. By delaying the time of irrigation to later in the evening or even during the middle of the night, the amount of water needed for irrigation was reduced because of a lower factor of water evaporation under cooler conditions. The city also installed a centralized irrigation command center, which increased the efficiency of controlling the irrigation of parks. Such a system may help a city to control irrigation in many ways. For instance, since the installment of this system, in the case of a sudden rain shower the City of Berkeley can cancel an irrigation period for all parks with the touch of a button. Without such a system, city employees would have to travel to each irrigation location and manually cancel the irrigation. Not only does a centralized irrigation control system help save water, but it also increases the efficiency of city employees because they have to spend less time working on a manual irrigation system.⁸³

The City of Pasadena has taken a different approach – they have implemented programs that might help residents lower their consumption of water. Incentive based programs have great potential to help cities to reduce their water use as well as help residents save money while making their city more sustainable. Pasadena has created incentive programs including rebates on high efficiency clothes washers (\$200), dual flush toilets (\$265), Energy Star appliances (up to \$150), and efficient pool pumps (up to \$250). Along with these incentives aimed towards household appliances, Pasadena

⁸³ Mary Kay Clunies-Ross, "Berkeley Residents Urged to Join City in Water Conservation," Public Information Press Release, <http://www.ci.berkeley.ca.us/ContentPrint.aspx?id=3422>.

provides rebates for residents that plant certain species of trees on their property (up to \$50).⁸⁴ By encouraging residents to plant selected species of plants that need less water than other more popular plants, people will be conserving water and saving money both initially with the rebate and over time in terms of the monthly costs of irrigation.

The City of Sacramento has developed a system of water auditing. The program begins with the city offering residents the option of installing a readable water meter on their property. Concurrently, the city will hire trained water auditors to audit all metered accounts free of charge to the property owner. Auditors will identify sources of water waste, recommend repairs, and educate homeowners on various ways to continue to improve water conservation inside and outside of their homes. Participating residents will periodically receive information regarding seasonal irrigation schedules and new water conserving technology. The City has set the goal of completing at least 400 new residential meter retrofits annually with a budget of \$400,000 per year. As a compliment to this water auditing program, the City of Sacramento plans to introduce another program of rebates and incentives for residents to install water-conserving appliances and fixtures. Similar to Pasadena's incentive program, Sacramento plans to give residents incentives to invest in low water-use toilets, fixtures, appliances, landscape material and irrigation equipment.⁸⁵

The City of Santa Monica has been a front-runner in the efforts regarding sustainability for decades and has clearly established itself as a leader in this area. In terms of water efficiency, Santa Monica has established many programs. The City

⁸⁴ Residential Programs & Conservation Rebates, "Water Efficiency Rebates," Pasadena Water & Power, <http://www.ci.pasadena.ca.us/waterandpower/Rebates/default.asp>.

⁸⁵ Water Forum Conservation, "Water Conservation Plans," City of Sacramento Water Forum, http://www.waterforum.org/PDF/APPEN_J.pdf.

provides free home water assessments for houses, condominiums, and apartments, which are inspected for leaks and other sources of water waste. Upon completion of such assessments, owners are notified of ways to decrease water usage including recommendations for new faucets, toilets, appliances, etc. for which they have an accompanying incentive/rebate program similar to Pasadena and other cities with such programs. Santa Monica provides online education of various ways to save water and money, particularly in terms of landscaping. Santa Monica has also implemented many rules and regulations regarding water conservation. The City has a “Bay Saver Fee Ordinance” which is a fee assessed to every residential water account in the event that the property has not been retrofitted with water conserving fixtures. In Santa Monica, it is a law that any building that changed ownership after May 1, 1993 must become retrofitted with water efficient fixtures as a new condition of escrow in the City. Santa Monica’s “No Waste Water Ordinance”⁸⁶ presents various ways that the City has restricted water use within city limits as follows:

- Irrigation is not permitted on lawns or landscapes except between the hours of 4:00pm and 10:00 am.
- Sidewalks, driveways, patios, alleys, parking lots, or any hardscape is not allowed to be hosed down.
- Runoff from lawns and landscapes is not permitted.
- Water may not be used in decorative fountains, ponds, or lakes unless a recycling system is installed.

⁸⁶ Residential Water Programs, “No Water Waste Ordinance, SMMC: 7.16.020, adopted April 14, 1992,” The Office of Sustainability and the Environment, http://www.qcode.us/codes/santamonica/index.php?topic=7-7_16-7_16_020.

- Swimming pools may not be drained unless a necessary repair is being performed.
- Water leaks must be repaired immediately.
- Vehicles may only be washed with a bucket of water or a hose equipped with a shut-off nozzle.
- Restaurants may only serve water upon customer request and must post information regarding this restriction.

Energy Conservation

Pasadena Water and Power has developed a wide variety of programs for designed to conserve energy or participate in alternative energy production. The Residential Green Power Program gives residents the option of purchasing green energy for a small additional charge per month (500 kilowatt hours equates to an additional \$12.50 per month).⁸⁷ As with water conservation, the City of Pasadena has Green Power rebates that aim to give incentives to residents for their participating in the Green Power Program. Residential accounts can purchase items such as a high efficiency clothes washer, new refrigerators, efficient pool pumps, and many other household items.

Furthermore, the Pasadena Solar Initiative and Rebate Program reimburses participants for the cost of permit fees associated with the installation of solar units. Additionally, new solar accounts receive an option of receiving an up front rebate or a performance rebate paid in installments over the course of a five year period depending on the amount of energy created by the units.

⁸⁷ Green Power Program, "Residential Green Power," Pasadena Water and Power, <http://www.ci.pasadena.ca.us/waterandpower/greenpower/default.asp>, accessed April 8, 2009.

Recycling and Solid Waste Reduction

The City of Oakland has adopted a “Zero Waste Goal by 2020” under resolution number 79774. This idea was introduced by In order to accomplish this goal, the City has established a Zero Waste working group to work with the Mayor to develop a Zero Waste Strategic Plan that will provide incite to the planning and list of actions that the city will take to achieve the ultimate goal of zero waste. The Zero Waste group will convene with other local and regional groups to help the City of Oakland develop a comprehensive zero waste plan complete with strategies and incentives that will aim to reduce waste.

The City of San Francisco has also succeeded in closing in on its goal of becoming a zero waste city. Currently, the city diverts 70 percent of its trash and plans to hit the 75 percent mark by the year 2010.⁸⁸ One major policy that San Francisco has adopted is the “Plastic Bag Reduction Ordinance” of 2007. Plastic shopping bags create many problems for the City, the residents, and especially the environment. As in most US cities, plastic shopping bags plastic bags have proven to be “convenient, lightweight, and inexpensive.”⁸⁹ Plastic bags have become a popular necessity of any grocery store shopping experience and communities around the globe are beginning to witness the

⁸⁸ Our City’s Programs, “Zero Waste,” City of San Francisco Department of the Environment, http://www.sfenvironment.org/our_programs/overview.html?ssi=3.

⁸⁹ Plastic Shopping Bag Information, “What are the environmental impacts of plastic bags?” Wisconsin Department of Natural Resources, <http://dnr.wi.gov/org/aw/wm/recycle/issues/plasticbagsFAQ.htm>, visited March 22, 2009.

effect that these “convenient, lightweight, and inexpensive” plastic bags are having on the environment. Of the major effects of plastic bags is the greenhouse gas emissions associated with all aspects of the life of a plastic bag. Greenhouse gases result first from the extraction process for the petroleum or natural gas. Second, greenhouse gases emissions occur during the manufacturing process. Third, greenhouse gases result from the transportation of these plastic bags from the factory to the front door of the supermarket. Additionally, plastic bags are a major source of litter pollution due to poor disposal practices. Poor disposal has resulted in the blockage of entrances drainage facilities, the death of many animals including marine life and birds, which are easily caught and trapped in the plastic, as well as in the creation of eyesores for public eyes as they get stuck to fences at construction sites and in trees at the park.⁹⁰ In order to combat these issues the City of San Francisco has “require(d) the use of compostable plastic, recyclable paper and/or reusable checkout bags by stores located in the City and County of San Francisco.”⁹¹

As of 2005, the City of Berkeley had achieved a rate of 75% solid waste diversion. Berkeley’s Solid Waste Management Plan was created to guide the City’s future solid waste policies and programs. The plan is a working plan designed to be dynamic from year to year depending on the outcome of the previous year. By the year 2020, the City would like to be a zero waste community. A zero waste community refers to a community in which all discarded material is converted from trash into beneficial use – nothing is to be sent to a landfill.⁹² Berkeley’s Solid Waste Management System is

⁹⁰ Ibid.

⁹¹ City of San Francisco, “Plastic Bag Reduction Ordinance,” Environmental Code Chapter 17 sections 1701-1709.

⁹² City of Berkeley Towards Zero Waste pg 5

divided into three general categories including single-family programs, multi-family programs, and commercial programs. These programs are further divided into three facets – source reduction, recycling, and composting. In 2005, single-family residential waste accounted for about twenty percent of Berkeley’s total generated waste. The most pertinent programs to the single-family residential category are the curbside recycling and curbside plant debris programs.⁹³ These programs lead the residential classification to accounting for over 20% of the city’s total waste diversion.

As with water conservation, the City of Pasadena has extended their incentive based rebate program to include recycling certain materials. Pasadena is offering residents up to \$650 in rebates for the replacement of old household appliances such as water heaters, dishwashers, washing machines, and even thermostats. Residents that purchase new refrigerators or freezers are given \$25 dollars for their old refrigerators and \$35 for their old freezers, as long as they are still in working order. Furthermore, residents who replace their inefficient pool pumps with new efficient pool pumps are eligible for up to \$250 in rebates.⁹⁴ These rebates act as a proficient way for the city to promote the exchange of inefficient household appliances for new, energy-efficient appliances and also act as a good way to make residents aware of the strong effort that their city government is putting into moving the city in the direction of conservation and sustainability.

The City of Santa Monica’s Office of Sustainability & the Environment has utilized many of the aforementioned principles in terms of solid waste reduction and recycling. One innovative technique that Santa Monica has used relates to the waste

⁹³ City of Berkeley Towards Zero Waste pg 38

⁹⁴ City of Pasadena Rebates

resulting from construction and demolition. Construction projects which are proposed at a cost of \$50,000 or more or those which cover an area of more than one thousand square feet must meet the guidelines specified in the Construction and Demolition Debris Ordinance as set forth in the city's Waste Management Plan. According to the city's Waste Management Plan, all construction and demolition projects must remove all concrete, bricks, drywall, lumber, and any other construction related wastes from construction sites by the use of authorized construction containers and must be transported from the site by authorized private haulers to an approved recycling facility.⁹⁵ Furthermore, the Construction and Demolition Debris Ordinance states that construction projects must reach a solid waste diversion rate of sixty percent and must be documented by the contractor upon completion of the project.⁹⁶

Air Quality Improvement

Many cities have noticed the fact that the air pollution that occurs in one city is oblivious to city limits – that is, the pollutants of one city directly affect neighboring cities and regions. In fact, in many cases, cities with high levels of pollution may not even be guilty of the source of the pollution. With this in mind, cities around the nation are beginning to come together regionally to fight the issue of air pollution and the negative effects that coincide with this issue. Cities such as Sacramento, Santa Monica,

⁹⁵ Waste Management, "Construction & Demolition Waste," City of Santa Monica Office of Sustainability and the Environment, <http://www01.smgov.net/swm/business/cd.htm>.

⁹⁶ City of Santa Monica, "Construction and Demolition Debris Ordinance #1996, December 19, 2000," http://www01.smgov.net/swm/documents/Waste_Plan_Form.pdf.

Berkeley, and many other have committed themselves to working with neighboring municipalities concerning air pollution.

The City of Berkeley has established a major plan involving participation in a regional taskforce. As the City of Palm Springs faces a problem with particulate matter pollution, the City of Berkeley faces a problem with dioxin pollution.⁹⁷ Dioxin refers to a group of chemicals known to be highly carcinogenic. The chemical is a product of toxic waste resulting from the burning of chlorinated material. Patterns show that minority communities are more likely to be targets of dioxin polluting incinerators, not only in Berkeley, but across the United States. In order to combat the problem of dioxin pollution and the associated negative externalities of factories and plants that release this chemical into the air, the City of Berkeley has adopted resolution number 60.196-N.S.⁹⁸ This resolution establishes a commitment to create a regional taskforce designated to identify sources of pollution and recommend action to local city councils that would eliminate current sources of dioxin emission and prevent dioxin pollution in the future. Large producers of dioxin emissions will be required to participate in public hearings to inform the city council and the rest of the public on the progress that they are making in reducing their dioxin emissions. It is a focus of this taskforce to decide how the City can move those dioxin emitting factors out of neighborhoods of color or low-income neighborhoods. The resolution also makes it against the law to burn PVC plastic in the San Francisco Bay Area.⁹⁹ Since pollution does not recognize jurisdictional boundaries,

⁹⁷ The City of Palm Springs does not face a problem with dioxide pollution. I have used the City of Berkeley's method of reducing dioxide pollution simply as a model.

⁹⁸ City of Berkeley Resolution, "Eliminate Anthropogenic Sources of Dioxin Pollution," adopted September 14, 1999.

⁹⁹ Council Action, "City of Berkeley Resolution No. 60.196-N.S Text," City Manager James Keene, adopted September 14, 1999, <http://www.thecre.com/ntp/resolution-berkeley.html>.

the City of Berkeley is wise in its decision to team up with other volunteer cities to establish this taskforce against dioxin production.

Procurement

The City of Oakland has established a “Green Fleet” resolution in an attempt to help improve air quality and reduce greenhouse gas emissions. This resolution states that the City of Oakland will purchase alternative fuel vehicles for any addition to its non-emergency fleet of vehicles in any case as long as the vehicle budget is not compromised. The ultimate goal is to have a fleet that is entirely comprised of only fuel-efficient and alternative energy vehicles. The resolution further states that the City will continue to participate and pursue all state and federal incentive programs related to such sustainable practices.¹⁰⁰

The City of Santa Monica has also begun to look at the percentage of non-emergency city fleet vehicles that are using alternative fuels, particularly the Big Blue Bus fleet. In 2006, with over 500 city vehicles, eighty-one percent were alternatively fueled – a huge progression from only ten percent in 1993. In 2006, of the 217 Big Blue Bus vehicles (including service vehicles), nearly 50% were fueled alternatively. Santa Monica’s ultimate goal is to have 100% of publicly used vehicles to be alternatively fueled. In order to reach this ultimate goal, the city plans to gradually replace the remaining vehicles as they are pulled out of service.¹⁰¹

¹⁰⁰ City of Oakland Res. 77842

¹⁰¹ Santa monica alternative fuel vehicles

The City of Berkeley has adopted a resolution called the “Environmentally Preferable Purchasing Policy,” which states that the City will establish procurement criteria to purchase products and services that minimize environmental impacts where an environmentally-safe product can perform the duties for which the product is being purchased. The “Environmentally Preferable Purchasing Policy” includes the following guidelines for city procurement:

- Purchase products and institute practices that conserve energy and water, use agricultural fibers and residues, reduce greenhouse gas emissions, use unbleached or chlorine free manufacturing processes, and use recycled wood and wood from sustainably harvested forests.
- Purchase energy from renewable or green sources in preference to fossil fuels.
- Purchase products that are free of mercury and lead and eliminate the use of other persistent bioaccumulative toxic chemicals
- Increase the use and availability of environmentally preferable products, services and distribution systems that protect human health and the environment.
- Support emerging and established manufacturers and vendors that reduce environmental and human health impacts in their services and production and distribution systems
- Create a model for successfully purchasing environmentally preferable products and services that encourage other buyers and consumers in our community to adopt similar goals.¹⁰²

This is an all-encompassing type of policy that will provide a good foundation for the City of Berkeley in term of making changes to their publish spending in the near future.

¹⁰² City of Berkeley Procurement

The City of Fremont has established an administrative regulation on all departments and divisions of city government that intends to influence the city government and staff to increase the percentage of purchased products that are recycled and waste reducing. This resolution specifies the importance of purchasing products that are chlorine free, recycled, remanufactured, and reused as well as products that produced using post-consumer, pre-consumer, and recovered material. The policy states that city staff should begin to practice purchasing fewer products whenever possible without compromising cost-effectiveness or safety in the workplace. Staff should begin to purchase products that are durable, long lasting, reusable, and refillable including toner cartridges, tires, furniture, equipment, and automotive parts. Staff shall prefer vendors that are environmentally conscious and staff should request that vendors use the least amount of packaging material as necessary. These aforementioned regulations, as well as many similar others, are intended to help the City of Fremont and city staff to become a more sustainable city and management team.

Golf Courses

The term “luscious golf course” is not commonly associated with the word “desert.” Yet, since its early years, the City of Palm Springs has become home to numerous public and private golf courses and this feature has drawn much attention to the city over the years. In fact, a quick trip to the Palm Springs International Airport will reveal just how many people come to Palm Springs for golf.¹⁰³ Although the designation

¹⁰³ I recently visited the Palm Springs International Airport and saw that the baggage carousel was completely covered with travel cases undoubtedly filled with golf clubs. (citation may not be necessary)

as a top golf city has facilitated much progress and growth for the city, it has also lead to many issues in terms of sustainability.

“Golf courses by their very nature are not sustainable,” especially in a city such as Palm Springs where the water supply is limited and most of the plants found on golf courses are not found in the typical desert landscape.¹⁰⁴ For one, golf courses are characterized by luscious lawns, green playing surfaces, an array of different plant and tree species, water features, man-made lakes, etc.¹⁰⁵ These features of golf courses truly make the term sustainable golf an oxymoron.¹⁰⁶

As difficult and contradictory as it may seem, golf courses around the United States have begun taking steps towards more sustainable practices. One feature of an environmentally friendly golf course is the use of sustainable vegetative practices. One such vegetation practice is the use of native plant species, or “naturescaping.” The use of native plant species is a more efficient and sustainable practice than the traditional landscaping practice of planting those species of plants that would never naturally exist in that location. Benefits of “naturescaping” include the fact that native plants do not require high levels of water beyond that which exists naturally in the local soil nor do they require the life support of chemical fertilizer.¹⁰⁷ As a result, a golf course that practices the use of native plant species will undoubtedly have lower maintenance costs as well as a more durable and lasting assortment of vegetation. One such golf course that has taken the opportunity to use native plants is the Parkland Golf and Country Club in

¹⁰⁴ Ronald G. Dodson, *Sustainable Golf Courses*, Chapter 1 “Sustainable Golf and the Environment,” New Jersey: John Wiley & Sons, Inc. 2005, pp. 7.

¹⁰⁵ Section II of this study examines the environmental impacts of lawns.

¹⁰⁶ Dodson, pp. 7.

¹⁰⁷ How to Naturescape, “Traditional Landscaping v. Naturescaping,” PlantNative.com, http://plantnative.org/how_intro.htm#tlvn, visited March 29, 2009.

Parkland, Florida. This golf course features a 2.64 acre garden of native plant species which are labeled to provide environmental education for guests.¹⁰⁸

Another feature of a more sustainable golf course is the incorporation of vegetative filtration. Vegetative filtration is the use of certain plant species and the organization of those plants to filter runoff before it gets into the groundwater.¹⁰⁹ This technique uses strips of plants as biofilters to reduce the groundwater contamination due to runoff. As water flows through these plant strips, the plants remove sediment, chemicals, organic material, as well as nitrogen and phosphorus which the plants use for their benefit. Proper use of vegetative filters generally results in removal rates of 50% or more.¹¹⁰ The Robert Trent Jones Golf Club in Gainesville, VA, is one such golf course that has begun to practice vegetative filtration.¹¹¹

The incorporation of grassy swales provides golf courses with better water management. “Grassed infiltration swales” is a term that refers to depressions that carry storm water or runoff from one area of the golf course to another. The strategic placement of such swales will help filter water through vegetative filtration and decrease the amount of water waste. Typically placed near hardscapes such as streets, driveways, and even roofs, grassy swales can also be used on golf courses.¹¹² This landscaping technique works well around the border of a golf course as well as around the putting greens, which typically are characterized by restricted permeation. The Black Lake Golf

¹⁰⁸ The Experience, “Botanical Gardens,” Parkland Golf & Country Club, <http://parklandgolf.wcicomunities.com/experience/amenities/sports-club#5>, visited April 1, 2009.

¹⁰⁹ “Filtration Stormwater Controls,” Stormcon, Denver 2006, <http://rpitt.eng.ua.edu/Publications/StormwaterTreatability/Filtration%20Woelkers%20et%20al%20Stromcon%2006.pdf>, visited April 3, 2009.

¹¹⁰ Dodson, pp. 128.

¹¹¹ Dodson, pp. 129.

¹¹² Stormwater Utility, “What are Grassed Infiltration Swales?” Spokane County, <http://www.spokanecounty.org/StormWater/content.aspx?c=1779>, visited April 3, 2009.

Club in Onaway, Michigan, uses grassy swales as a way to both filter and inhibit water runoff from the golf course.¹¹³

In terms of filtration of water, other options exist. In many cases, such as in the City of Palm Springs where the climate is so hot and dry, an increase in the amount of vegetation as a way to filter runoff water may not be the most sustainable route. In such a case, the creation of mechanical forms of filtration may be more applicable. Sand filtration methods are one of the oldest and most efficient methods of water filtration.¹¹⁴ In a sand filtration system, runoff is redirected into a basin in which the water slowly flows through a filter of sand which removes hydrocarbons and other destructive chemicals before the water slowly percolates back into the ground. Bridges at Casino Magic is the name of one golf course that has taken advantage of sand filtration systems.¹¹⁵

The incorporation of existing landscapes into golf course design is a clever way to reduce immediate and future environmental impacts. This method requires a proper location as well as the creativity to design a golf course around the existing landscape. The Roxburgh Golf Club in Scotland is a world-famous golf club that has incorporated the use of existing land features into the golf course. Rock beds, boulders, hills, and existing trees were all integrated into the design of the course at its inception.¹¹⁶ The use of artificial water features, ponds, and streams also falls into this category. The use of these water features is not necessarily an essential element of a high-quality golf course design. For this reason, golf course developers and managers should not incorporate the

¹¹³ Dodson, pp. 130

¹¹⁴ Onsite Wastewater Treatment and Reuse, "Sand/Gravel Filter," AgriLife Extension Texas A&M System, http://ossf.tamu.edu/sand_gravel_filter.html, visited April 4, 2009.

¹¹⁵ Dodson, 137.

¹¹⁶ New Zealand Golf Technical Fact Sheet, "Sustainable Golf Course Design," NZ Sports Turf Institute.

use of such ornamental features at the expense of the environment and community unless the water feature exists naturally.

Another way for golf courses to conserve water is by using recycled water for irrigation. Torrey Pines Golf Course is a public golf course owned by the City of San Diego and is on the U.S. Open Circuit. This course is arguably one of the most well-kept courses in the world and perhaps the best aspect of the course is that it is irrigated with recycled water. The use of recycled water is a more sustainable and financially efficient means of providing irrigation for golf courses. Reclaimed water is cheaper than potable water and is more reliable than potable water, especially during droughts.¹¹⁷ The fact that Torrey Pines Golf Course uses reclaimed water is a testament to the concept of using recycled water to irrigate golf courses.

Many golf courses around the world are located in areas where endangered and/or threatened species live. The Royal Birkdale Golf Club, another championship course in Southport, England, is located on a protected habitat for select species of reptiles, particularly the natterjack toad and sand lizard.¹¹⁸ In order to protect these threatened species, the management of the course has implemented several rules, regulations, and policies in terms of player and observer circulation around the course. Those areas in which the threatened species are most likely to live (i.e. heavy shrubbery) have been identified and consequently are not accessible to players or observers. During match play, sensitive areas are fenced off and monitored by Birkdale employees who are spread throughout the golf course during the match.

¹¹⁷ John Gelhard, "Reclaimed Water: A Responsible Way to Conserve," Heaviland Enterprises, Inc. (DATE)

¹¹⁸ *The Open Naturally*, short video, produced by R&A Golf Course Committee, 2008.

Municipal Responsibility

As this section has explored, there are a huge number and variety of government programs and policies that have been implemented on the local level in an attempt to move towards sustainability. Despite the fact any effort is better than no effort at all, different programs and policies, especially across cities, have experienced different levels of success. After accepting this fact, but before committing to any particular policy or program, a city must first examine the reasons why policies fail so that we can learn from the misfortunes of other cities and avoid making the same mistakes that they did.

Accountability holds much weight on whether or not implemented policies actually make a difference and help to make a community more sustainable. Accountability refers to the action that is taken after a policy is implemented, in which case there are essentially two possibilities. The first possibility is for the city government to actually enforce the policy that they have implemented through an auditing program, law enforcement, monitoring program etc. The second possibility is for the city government to not enforce the policy. In the latter case, the city government must not have passed the policy with truthful intentions and probably just passed the policy as a means of appealing to their constituents or a community organization that has been pushing the city for such a program or policy. A city government that is committed to sustainability must be committed to not just passing city ordinances and implementing new programs, but also to enforcing those policies and programs after they are implemented.

One way that cities can hold themselves accountable for programs and policies that they implement is by establishing paid positions that are dedicated to the field. For instance, the City of Santa Monica's Office of Sustainability and the Environment is dedicated to promoting the programs and ordinances that the city has established. Within the Office of Sustainability and the Environment (OSE) are several taskforces that work with specific projects, policies, or programs. The OSE is further divided into nine divisions including the Hazardous Materials Management, Energy, Green Building, Communications & Environmental Education, Integrated Pest Management & Purchasing, Sustainable City Plan, Urban Runoff, Underground Storage Tanks, and Water Efficiency & Landscaping programs. Each program has a dedicated liaison on staff with the City of Santa Monica who reports to the rest of the department, the city manager, and even the city council and mayor when needed.¹¹⁹

By creating a department that is dedicated to sustainability and smart growth, a city government is truly committing itself to being accountable for the enforcement of related programs and ordinances. Municipal departments such as Santa Monica's Office of Sustainability and the Environment, Berkeley's Department of Energy and Sustainable Development, and Pasadena's Green City Program are a valuable element of the process of becoming a more sustainable city.

¹¹⁹ The Office of Sustainability and the Environment, "About the OSE," City of Santa Monica, <http://www01.smgov.net/epd/about/index.htm>, accessed April 7, 2009.

V

Downtown Palm Springs

A Fundamental Problem: Downtown Redevelopment or Fringe Development

Since the 1920s, cities across the United States have seen a steady decline in the health of their downtown communities. The small businesses and members of the middle class that once thrived within the downtown environment have gradually moved to the outer regions of cities known as the suburban fringe. Numerous factors have contributed to this decreasing trend in activity within the downtowns of cities, but the major problem that thwarts the maintenance of a thriving downtown is the cost of redevelopment. In 1973, a reporter asked Edward DeBartolo, the largest retail center developer in the country, what developers should do in terms of the high costs of downtown redevelopment and he replied, “Exactly what I’m doing: stay out in the country. That’s the new downtown.”¹²⁰

Typically, once a city is “discovered,” that is, when the town becomes a destination point for residents, businesses, or visitors, the city experiences what is known as an economic boom.¹²¹ Money is spent by people who open businesses, new homeowners, and land developers in a concentrated area of the city which becomes the downtown area. Jobs are created by this framework of development and more people

¹²⁰ Bernard Frieden and Lynne Sagalyn, *Downtown, Inc. How America Rebuilds Cities* (Cambridge: MIT Press, 1989), pg 5

¹²¹ A. Scott, “Smart Growth in Canyon Country: Challenges and Opportunities in Moab, Utah” (UEP Senior Comps, Occidental College, 2008), 49.

continue to relocate in and visit such an area where economic prosperity exists. Then, after some time of growth, the city begins to experience a period of decline in which many of the shops, restaurants, businesses and buildings in the downtown become relatively outdated and fewer people are attracted to the area. At this point in the life of the downtown of a city, revitalization is needed in order to retain not only the economic prosperity that the city once experienced, but also the sense of place and community.

What is the fundamental problem associated with the decline in the quality of the downtowns of cities? On one hand, developers can choose to redevelop downtown land; however, this type of investment poses many problems for developers. The land in pre-developed parts of cities is often difficult to develop since this land is already being used and is usually owned by several parties, which makes the acquisition of the desired plot of land complicated. Developers who invest in downtown land are also often faced with local business regulations, environmental regulations, preservation laws, etc. On the other hand, developers have the choice to develop open land on the fringe of cities where they are faced with fewer regulations and where the land is cheaper and easier to acquire and develop. With this, developers are attracted away from downtown redevelopment and towards new fringe development due to lower overall costs.

With this problem associated with downtown redevelopment, prosperity and growth is not out of the question. Hope lies within the existence of a strong city government which holds the authority and power to improve the quality of downtown city centers.

The Conflicting Interest

Land developers and investors are instrumental to the revitalization and sustainable development process of downtowns. Developers and investors facilitate the transition of the thoughts and ideas of city governments and communities into realities. Communities benefit from the work of developers in many ways. People can enjoy a good sense of community in their local downtown. Families can go downtown and enjoy dinner and a movie. People can go downtown to get groceries, clothes, gifts, and almost anything else they need without even getting in their car. With all of these great benefits that result from the work of developers, it is important to remember that most developers are making quite a bit of money in the process and although they do realize that they can make a huge positive impact on their community, they probably would not embark on such projects if they knew that the pay off was not going to be substantial. With this concept, developers are constantly at battle with many sectors of the community before, during, and after a project is completed.

One major conflict that developers have is with local business owners and merchants. In many cases, a developer may come into an area and purchase the rights to either a vacant land parcel or a vacant building and before the developer can proceed with any project on his or her new plot of land, they must go through many procedures in regards to planning, permit approval, funding, and so on. During this idle time, the buildings or vacant lots are often left without any up-keep such as paint, window protection, trash pick-up, or security because developers frequently plan on demolishing all or some of the existing infrastructure, so any investment in the property would not

provide any future economic benefit for the developer. At the same time, the building or land becomes an eyesore for nearby storeowners, visitors, shoppers, and anyone else that happens to be walking or driving by the site. This presents a large problem to local merchants in particular. These neighboring business owners argue that run-down buildings with graffiti, broken windows, and vacancy have a negative effect on their own businesses. Customers are not attracted to areas that are not clean and attractive and are not as likely to stop at the nearby businesses. Another issue that local business owners have with developers is the types of businesses to whom developers lease out their buildings. For example, a local bookstore owner who has been in the downtown district of a city for any number of years would not be happy with a major retail bookstore moving in next door. Likewise, a local restaurant owner would not be excited about a large scale chain food restaurant moving into a building across the street. Both of these hypothetical situations occur everyday in the real world, and the result has been a steady decline in the number local grocery stores, restaurants, bookstores, and other local novelty style shops and an increase in the number of Wal-Mart and Barnes & Noble type superstores.

A second class of conflict that developers are involved in is with members of the community including activist groups, local residents, and community organizations. One such group that developers often find themselves tangled up with is historical preservation groups. One example of this is an old Baptist Church in St. Petersburg, Florida, which was recently bought by a developer in an attempt to demolish it and put a new retirement hotel in its place.¹²² A group known as St. Petersburg Preservation has

¹²² Waveney Moore, "Retirement home owner plans to buy, raze church," *St. Petersburg Times*, February 6, 2008, Local & State, 4B.

been doing its best to protect the Neo-classical style building which many members of the community regard as an icon of the city. Buildings such as an old church, hospital, hotel, or even gas station may have great value to a community in terms of sense of place and history, so preservationists and other community based groups work to restrict the ability of developers to simply purchase any building they want with the intent of demolishing it. Local residents also find themselves in disagreements with developers. Developers who aim to build on a plot of land near a neighborhood are often approached by unhappy homeowners who do not want a huge condominium building or hotel built next to their neighborhood. In Palm Springs, Ca, developers are constantly fighting against anti-hillside development groups who want to keep developers from building resorts and homes on the nearby mountains. In 2005, the city council allowed a development that would encompass nearly two thousand acres of hillside near downtown Palm Springs. Preservationists, homeowners, downtown business owners, and various other community groups rallied together to protest the development. After gaining enough support and completing the required petition, the debate was sent to ballot in 2006 and the city council's decision was overturned – the developer would not be allowed to continue with the project.¹²³ Although the power of community organization in such situations has the potential of being incredibly strong, there are many times that the financial and politically influential power of the developer overcomes the effort of the community in which case developers proceed with their projects.

The conflict between city government and developers is commonly overlooked, usually occurring without the rest of the community knowing it. When a developer's

¹²³ Riverside County Elections, "City of Palm Springs Municipal Measure," Riverside County, <http://www.election.co.riverside.ca.us/eresults/29/ElectionResult.htm>.

project plans are inconsistent with a city's master plan or a city ordinance, developers must go to the city government to ask for special permission to get a permit for the project. A developer may have legitimate reasons for insisting on building their project as they envision it and sometimes city governments allow developers to continue with their projects. In most cases, however, developers and city government battle back and forth in an attempt to find a common ground on which the project can be permitted. Issues that developers typically have with cities include project size, architecture, height, zoning, and environmental restrictions. One example of a project that was approved after much deliberation is a downtown development in the city of Falls Church, Virginia (population 11,000). In this example, a development firm known as Atlantic Realty wanted to replace vacant parking lots and buildings in the city center with an eight story hotel, condominiums, bowling alley, and office buildings. Members of the community including local homeowners, preservationists, and other groups urged that the city council turn down the project. The critics of this project argued that such a development would take away from the small town feeling of the town and that the development would not represent anything historical or monumental about the city. Supporters of the project, including the developer and the mayor, were assured that the project was in the best interest of the city. They said that it would help the city in terms of revenue and would also contribute to Falls Church's sense of place.¹²⁴ In this situation, the two opposing sides could not find a common ground; nevertheless, the developer was allowed to proceed with the project.

¹²⁴ Kristen Mack, "Falls Church Turns to the Future: Council gets ready to vote on city center redevelopment plan," *The Washington Post*, February 25, 2008, Metro, B01.

One final point that often arises with developers in terms of conflicting interest is the influence that they potentially have in terms of campaign finance and their access to seats on boards, commissions, or even city councils. Governments on all levels experience problems associated with campaign finance. Particularly in elections, candidates rely heavily on campaign contributions and the interest groups that essentially finance their campaigns. In federal elections, there are many common patterns that exist in terms of campaign contributions. A few of the basic patterns are that the business sector contributes more than the labor sector, the oil and gas industries contribute more than environmental groups, and the wealthy upper class contributes more than the lower classes. The effect that this has on a community is that politicians often feel responsible to those parties that helped them get into office in the first place; thus, politicians will often feel obligated to promote issues that may benefit those parties that they rely so heavily on in terms of political and financial support. In local elections, issues with the funding for ballot initiatives and city ordinances are more common. For instance, in the city of Palm Springs there was a 2005 ballot measure called “Save Our Mountains” that would establish a 55.5 square mile preservation zone along Palm Springs’ southern and western mountains, limiting development in that area. The money raised in support of this ballot was led by preservationist groups who raised \$32, 679 dollars for their campaign. The opposing side was led by developers who raised \$245,885. With eight times more in campaign contributions, it is not difficult to determine which side would get the edge in terms of campaign advertisement and marketing.

The conflicts between developers and the residents, the business sector, and the public sector are essential for high quality city development. If these ongoing battles did

not exist, then developers would have a free reign over every community and development would never go in the direction that the community wants it to go. These conflicts constitute yet another important ingredient of smart growth.

The Role of City Government/ Developing a Downtown Development Plan

A strong and thriving downtown is an important aspect of a city in terms of history, image, community, and economic growth. For these reasons, it is in the best interest of a city government to ensure that the downtown of their city is flourishing. There are many key ingredients to the maintenance of a successful downtown, all of which the government of a city should be responsible for preserving.¹²⁵

The government of a city holds many basic responsibilities when it comes to the management of a city's downtown. The city should focus on facilitating economic growth. The city should increase or at least maintain the quality and quantity of the housing stock in the center of the city. The city should maintain the physical aspect of the community including parks, recreational areas, and parking. The city should facilitate the existence of a variety of services within the community such as retail, entertainment, social services, and other aspects of a community that may promote social welfare for the entire population of the municipality. A city that holds itself accountable for these essential civic elements is likely to progress or at least maintain the quality of its community and the existence of its downtown.¹²⁶

¹²⁵ Michael Burayidi, *Downtowns: Revitalizing the Centers of Small Urban Communities* (New York: Routledge, 2001), 9.

¹²⁶ John Levy, *Contemporary Urban Planning* (Upper Saddle River: Pearson Prentice Hall, 2006), 176.

A municipal government should focus on developing a downtown plan.¹²⁷ Many cities proceed with developments, grants, and downtown investment without a good idea of what they are working towards. Often, a city will promote several great projects for its downtown that do not fit into a comprehensive overall plan. Although there may not be any immediate negative implications of such projects, the city will often find that future implications will emerge. A city should create a vision for its downtown and then create a plan that is built upon this vision as a way to guide decisions related to downtown development and revitalization.

In developing a downtown master plan, city government should make sure that its city center is multifunctional, historical, and pedestrian friendly. Downtowns of the highest quality are able to attract people from different backgrounds, ethnicities, and economic classes and should be able to attract these people every day of the week and at every time of the year. For example, a downtown with only high-end retail stores and upscale restaurants will only appeal to the upper class members of the community. Such a downtown defeats the purpose of having a downtown, which should be a place where all members of the community can go to get services, purchase necessities, and enjoy themselves. Although it is important to have some high-end retail and upscale restaurants, these should only be one facet of the downtown of a city.

It is important that a downtown is historical and representative of how the city has evolved over time. Within this historical context is the concept of maintaining a sense of place of the city. Particularly true for small cities, the heritage of a downtown is the greatest asset of many cities. It is important for cities to preserve the original reasons for

¹²⁷ Michael Burayidi, *Downtowns: Revitalizing the Centers of Small Urban Communities* (New York: Routledge, 2001), 14.

which they were created. In the example of Moab, Utah, the city was found and developed because of the beauty of the region and the accessibility of the neighboring national parks. People came from all over the United States to enjoy the scenery and natural landscape that once seemed indispensable in this small community. Over time, an increasing number of tourists began to alter the demands of the city and lead to the overdevelopment of the region. The tourist industry has begun to dominate the city and resultantly has caused large scale hotels to be built and large scale commercial tourist attractions to flood the area with off-road motorists, cyclist, horses and other tourist attractions. Since this boom in the tourism industry, the natives of Moab have noticed a loss in the sense of place of their city. It is becoming increasingly difficult for the residents and tourists alike to enjoy the beauty and natural landscape of the region because of the development and commercialization that has occurred over time.¹²⁸ Clearly, the city of Moab failed to create comprehensive master plan that was successful in preserving the history and sense of place of the city.

Another characteristic of a good downtown is accessibility. A thriving downtown is accessible from many standpoints. First, people must be able to get to downtown from the outskirts of town, even if they cannot access a car. For this to be possible, the city must have a working transit system that allows people to travel efficiently from any part of the city to downtown. Secondly, the local streets, particularly the ones that lead to downtown, must be well kept and organized in terms of stop signals and organization of intersections. Sidewalks and bicycle lanes must also exist throughout the city on roads that people might be able to walk or bike to downtown on. Finally, people should be able

¹²⁸ A. Scott, "Smart Growth in Canyon Country: Challenges and Opportunities in Moab, Utah" (UEP Senior Comps, Occidental College, 2008).

to walk around comfortably when they are downtown. If sidewalks and walkways are nice, safe, interesting, and enjoyable, then people will be more likely to want to walk to, from, and around downtown. The benefits associated with having a walkable downtown are commonly overlooked.¹²⁹ For instance, any typical image of a thriving downtown includes large numbers of people walking to and from shops and restaurants. Without a well kept sidewalk system, pedestrians would be less likely to want to walk around the area and thus would be less likely to visit shops and contribute to the downtown community.

A municipal government should acknowledge the significance of a healthy relationship between the private sector and the public sector. A downtown committee made of up city officials, business owners, developers, and members of the community is one way that a city can help facilitate this relationship between the private and public sectors. When these groups collaborate on issues related to development, event planning, marketing and maintenance, the variety of input will result in a mutual benefit for all parties. City government can support such a committee by funding downtown development and community promoting activities, investing in capital improvements such as sidewalks, street maintenance, parking, and providing incentives that promote business owners to improve the image of their storefronts. Business owners can demonstrate their commitment to the committee by participating in local events, improving their building façade, and complying with the regulations and laws set forth by the committee. Developers can promote the master plans of the downtown committee by being responsible to the other parties involved and by abiding with the guidelines that

¹²⁹ Michael Burayidi, *Downtowns: Revitalizing the Centers of Small Urban Communities* (New York: Routledge, 2001), 18.

were put in place by the city. Community members can do their part by providing a responsible representation of the entire population of the city as well as by organizing their fellow community members in support of the events, investments, and decisions made by the committee.

One example of a successful downtown committee is the Auburn Downtown Partnership, which has worked to create a number of quality downtown projects including street improvement and the construction of downtown housing. The Auburn Downtown Partnership is a committee made up of city staff, downtown businesses, property owners, community groups, and other interested individuals.¹³⁰ On the other hand, when a city does not promote a partnership between the private and public sectors, the mutual benefit that is found in cities like Auburn is harder to come by. For example, Carson City, Nevada, has a downtown committee comprised mostly of city officials with only a small representation of the private sector and virtually no community representation. As a result, when decisions are made regarding downtown events, investment, and building, business owners and members of the community are not always in accordance with those decisions.¹³¹

There are many key characteristics of a thriving downtown that any city government should be committed to maintaining. Although it is impossible to outline every key ingredient to the ultimate downtown city center, if a city government commits itself to the aforementioned principles and ideals, then that city is likely to have a more prosperous and community oriented downtown than they would have otherwise.

¹³⁰ City of Auburn, "Auburn Downtown Partnership," City of Auburn, NY, http://auburnny.virtualtownhall.net/Public_Documents/AuburnNY_PLanning/auburndowntown.

¹³¹ Michael Burayidi, *Downtowns: Revitalizing the Centers of Small Urban Communities* (New York: Routledge, 2001), 11.

VI

Policy Recommendations

California cities such as Santa Monica, Berkeley, San Francisco and many others have established themselves as leaders in terms of achieving greater sustainability. Although, sustainability is a long term objective, in the short term those cities have successfully combined the three ingredients of good public policy as a way to promote smart growth. First, they have creatively designed public policy aimed to protect their respective communities and the environment. Second, they have gained support for the movement towards sustainability through education and marketing. And third, they have enforced the policies that they adopted. Many of the policies and programs that other cities have designed could work well in the City of Palm Springs, while others may not. This section seeks to identify those policies and programs which have the best potential of working specifically for the City of Palm Springs.

Water and Energy Conservation

Incentive based water conservation programs will provide members of the community with monetary benefits and thus are likely to be successful in Palm Springs as in most other cities. An incentive based program is a great way to focus on this aspect of sustainable policy because it provides the community with an optional participation program that can help people in many ways. People will save money and they will be participating in helping the environment. Such a program as this will help to create a

high regard for sustainability on behalf of those who participate in comparison to a strict policy that may scare people away from supporting the concept of sustainability. The City of Pasadena's incentive program covers a wide range of products including clothes washers, dual flush toilets, energy efficient pool pumps, and an array of Energy Star appliances. The funding that Pasadena provides for incentives may not work well for Palm Springs for a couple of reasons. First, many of the prices of the products have likely changed since Pasadena adopted the program, which would mean the amount of the incentive should change accordingly. Secondly, the amount of the incentives may fluctuate depending on the amount that is given as a budget for the project.

Similar to water conservation, energy conservation programs based on rebates provide the community with only an upside. Similar to the water rebates, energy rebates should include Energy Star appliances, energy efficient pool pumps, clothes dryers, refrigerators and any new technology that arises over the years. Another rebate that would help to conserve water would include a rebate for those residents that practice environmentally conscious landscaping practices including the purchase and utilization of native plants that require the use of less water and maintenance. The replacement of lawns should also be incentivized to discourage the incorporation of lawns into new houses as well as a way to encourage the transformation of lawns into more sustainable landscape terrain.

Residential water and/or energy auditing is also a good way to get people involved in sustainability. Although it is not required, if residents are offered an audit free of charge, then they will be likely to take that offer, especially if the program is marketed efficiently. An auditing program would provide homeowners with an

educational water and/or energy audit informing them of ways in which they can conserve water and energy in their homes and also gives the city an opportunity to promote their incentive program (if previously implemented) by informing residents of the availability of energy-efficient and water-efficient appliances and fixtures offered with rebates. It would not be a good idea to require retrofits from the beginning of the program. The reason for this, as with the incentive program, is that this type of program is an opportunity for the city to introduce sustainability to constituents rather than forcing laws and regulations from the start. Eventually, such programs such as energy and water auditing could become required of residents depending on the initial response of the community towards the programs.

Once the auditing program is in full swing, the City of Palm Springs could then pass a law requiring that all residential buildings that change ownership must be retrofitted as a condition of escrow.¹³² This would raise awareness of the auditing program and would dramatically increase the number of residential units that are fitted with water efficient plumbing fixtures and energy efficient appliances. Eventually, a similar program could be established for commercial buildings, which change ownership. On the commercial side of the program, the city would benefit not only from saving energy and water, but it is likely to bring sustainable firms and businesses into the city. Sustainable businesses are always looking to locate themselves in sustainable cities.¹³³ Again, the marketing strategies of such a program would be important and could have a huge impact on the results of the program.

¹³² This is borrowed from Santa Monica's Retrofit Upon Sale Ordinance, which requires that every building that is sold after May 1, 1993, must be retrofitted with water efficient plumbing fixtures if those fixtures are not already in place.

¹³³ John Raymond, Director of Economic Growth, City of Palm Springs, interview October 15, 2008.

An ordinance restricting the use of water within the city limits should be an ultimate goal for Palm Springs. Santa Monica's "No Waste Water Ordinance" is similar to other cities' ordinances regarding the restriction of water use. Possible items of such an ordinance in Palm Springs could include the regulation of irrigation times, hardscape runoff, landscape runoff, decorative water features (i.e. fountains, ponds, lakes), and the service of water in restaurants (water by request only). Such an ordinance would shock much of the community at first, so in its entirety it would probably not be the best introduction of sustainability, although individual aspects may work early on. The regulation of restaurants to serve water by request only should be considered for urgent implementation because it not only saves water, but those restaurants who participate and display placards with information will provide the city with further marketing to all residents and visitors who sit down at those restaurants.

In terms of public parks, the city should decrease the amount of water used for irrigation, use native plants when possible, and reduce urban runoff due to irrigation. A centralized irrigation control system would be a good investment for the city and would lead to a decrease in the problems associated with irrigation, including runoff. A centralized irrigation control system would allow for the immediate shutdown of irrigation in one or all parks within the city. This would be useful in the case of a sudden rain-shower or broken sprinkler, which both result in water waste. Without such a system, city employees have to manually control irrigation timers on site. With this, the centralized control system would help save water as well as increase the efficiency of city employees who would have to spend less time working on a manual irrigation system. To supplement a centralized irrigation control system, the city could post signs at parks

with a phone number for residents to call when they witness a broken sprinkler or excessive runoff, in which case a city employee would be able to flip a switch to turn off water at that particular park until on site service can be done.

Air Quality

Since air quality in Palm Springs is affected specifically by particulate matter, dust pollution, and ground level ozone, those are the areas where the city itself could improve. It would be in the best interest of the City of Palm Springs to establish a process that would enable it to identify sources of pollution, corresponding with city policymakers, providing research and informational services, and providing viable solutions that will prevent such pollution in the future. One way to do that would be to create a taskforce comprised of city employees, city council members, business owners, residents, and representatives from community organizations. After the taskforce has identified major sources of pollution such as businesses, farms, construction sites, etc., they should contact those large producers and require that they participate in taskforce meetings and as well as city council meetings.

Another method of fighting the issue of air pollution is to collaborate with other cities, which is what the City of Palm Springs has done. This method of collaboration aims at larger goals such as carbon dioxide emissions reduction. The city is involved with the South Coast Air Quality Management District and the Southern California Association of Governments. Given that the Palm Springs is involved with SCAQMD and SCAG, the city should take their involvement to the next level. The city should try

to establish itself as a leader in such groups by bringing new ideas to meetings and through marketing within the Palm Springs city limits. Again, this could be done more efficiently if a department was created that was specifically focused air quality.

Procurement, as discussed below, is a viable way for the city management and government to do their part to reduce greenhouse gas emissions.

Procurement

One way that cities have been able to make a difference in this area of city management is with vehicle fleets. A “Green Fleet” program such as in the City of Oakland would help to reduce greenhouse gas emissions and it would as serve as a way to set an example for the rest of the community. The program should require that any new addition to a publicly owned non-emergency vehicle fleet will be an alternatively fueled vehicle. With the rate of turnover of public vehicles, over the course of a ten year period the city is likely to have over 50% of their fleet comprised of alternative energy vehicles.¹³⁴

A purchasing policy that regulates the entire City Hall, City Council, City Management, and Departments would further help the city to set an example. The environmentally conscious purchasing policy should include all field and office supplies and services to the city. City staff shall be required to purchase products that are reusable, durable, long lasting, and refillable such as toner cartridges, tires, furniture, mechanical equipment, and automotive parts. City staff shall choose suppliers and

¹³⁴ City of Santa Monica reached 81% from 1993-2006.

vendors based not only on the quality of their product, but also the environmental impacts of the firm in terms of production of goods, packaging, and transportation. Marketing this policy would not only raise the public approval of City Hall, but would increase awareness of the city's effort to become a more sustainable place and is likely to rub off on the rest of the community.

Recycling and Solid Waste Reduction

Palm Springs should establish a zero waste goal. Many cities such as Oakland and San Francisco have established zero waste goals and after only a couple of years they have experienced major decreases solid waste production. The City of Palm Springs should first establish a recycling and solid waste department. This department will be responsible for working with Palm Springs Disposal which is currently the company that is the contracted hauler for trash in Palm Springs. The department will be responsible for the creation, marketing, and enforcement of recycling programs and will act a liaison to the city council and city manager for issues regarding waste. A taskforce comprised of city staff, policymakers, community members, and representatives from Palm Springs Disposal should be established to develop a comprehensive zero waste plan complete with strategies as well as incentive programs that will help to reach the ultimate goal of reducing waste diversion.

Another simple way to improve waste diversion rates is by banning the use of certain items. San Francisco's plastic bag ordinance is an example of one policy that would work well. Although the city may not receive a warm response from all members

of the community, particularly grocery stores, it will set a precedent in terms of recycling and solid waste diversion and will help to kick-start the trek towards zero waste.

Rebates for the recycling of dishwashers, clothes dryers, clothes washers, refrigerators, water heaters, and other appliances would help decrease the traffic of these appliances at landfills. Such a rebate programs should be tied in with the energy and water rebates and they should be marketed together as a way to promote both programs as well as a way to cut marketing costs.

Construction and demolition sites should be an area of focus for Palm Springs. Santa Monica's "Construction and Demolition Debris Ordinance" could provide a good template for a policy in Palm Springs. Santa Monica's ordinance requires that construction projects must reach a solid waste diversion rate of 60% and must be documented by the contractor upon completion of the project.¹³⁵ All recyclable material must be separated and transported using authorized private haulers (perhaps supplied by Palm Springs Disposal) to approved recycling facilities. The failure to meet the guidelines set forth by the city should result in either a citation, an increase in future permit fees, or some other disincentive to disregard such policies.

Golf Courses

For golf courses in Palm Springs, sustainability has always been looked at in terms of making sure that the business aspect of the golf course was sustainable. Golf

¹³⁵ City of Santa Monica, "Construction and Demolition Debris Ordinance #1996, December 19, 2000," http://www01.smgov.net/swm/documents/waste_plan_form.pdf.

course managers wanted to make sure that they were sustaining the number of customers that they had each season. They wanted to make sure than they were sustaining the quality of their playing surfaces and landscapes. They wanted to make sure that they were sustaining their reputation as a high class golf course. These were the concepts of golf course sustainability in the past, but today these narrow concepts have been expanded to not only focus on ensuring their economic sustainability, but also sustainability in terms of the environment.

Perhaps the greatest problem that is associated with golfing has to do with human nature. People like golf courses that are visually appealing and thus golf course designers build courses that will have an instant appeal to the human eye.¹³⁶ This leads to many problems, not only for the environment, but for the golf course management as well. As for the environment, those designers that focus on the visual appeal of golf courses do not consider the weight of environmental impacts of such visually appealing layout and landscaping. There are several negative consequences of such planning and design including the long term commitment of the management of the golf course to unprecedented expenses in terms of landscape maintenance. At the same time, the environment suffers greatly from such lavish design which incorporates the use of a multitude of water features, luscious lawns, and an array of tropical plant species.

The City of Palm Springs needs to develop a taskforce that specifically deals with existing golf course management as well as prospective golf course developers. The taskforce should be comprised of city employees, members of the community, representatives from various golf courses, and a sustainability consultant. New golf

¹³⁶ Technical Fact Sheet, "Sustainable Golf Course Design," New Zealand Sports Turf Institute and New Zealand Golf.

course designs and plans should be submitted to the taskforce throughout the various stages of planning and design of the course and before the development of any new golf course is begun, the taskforce must approve the design of the course. The taskforce should concentrate in the areas of landscape, the use of water features, location of drainage infrastructure, type of drainage infrastructure, and aspects of a golf course that could potentially have an environmental impact.

The first step in creating a more sustainable golf course is the placement of the course in the city. The City of Palm Springs features hundreds of acres of desert wash area stemming from the canyons of the local mountains. With this, there is only one golf course which has taken advantage of such areas. The Cimarron Golf Course in Palm Springs exemplifies thoughtful placement on behalf of the designers and developers by placing the course inside of a local drainage wash. This placement of a golf course has resulted in substantially lower maintenance costs for the management of the course because of the extremely low number of plants and fairway grass areas compared to other courses in Palm Springs, which are not located in a wash. The benefit of placing a golf course in a wash is that there must be drainage paths for water, which means there cannot be plants or grass in those areas. The result is a golf course which features patches of grass scattered throughout the desert wash with only the those places that are most necessary for grass to exist. In fact, whereas most golf courses feature eye-catching vegetation and water features as decoration in between the 18 different holes on a golf course, at Cimarron there is no grass or vegetation in between each hole; the cart path runs through the desert landscape. For this reason, Cimarron faces much lower maintenance costs and puts much less stress on the environment.

With the mountainous and desert landscape that characterizes so much of Palm Springs, it should not be difficult for golf course designers and developers to capture a visually appealing view on a golf course if it is placed in the right location. The utilization of panoramic mountain vistas and rugged desert landscape should be incorporated into golf course design to be used as a way to make a golf course more difficult versus using a water feature or luscious vegetation. The incorporation of existing rock beds, natural sand traps, and boulders would present a great challenge to players and would eliminate the need to include man-made lakes and forests that have huge negative impacts on the environment.

Vegetation that is used in golf courses in Palm Springs must be selective. There are many beautiful species of desert plants, shrubs, and small trees that could be utilized in replacement of those foreign species that require much more maintenance and irrigation than native species. It may be in the best interest of the city to create a rebate for golf courses for the incorporation of native plant species into their landscape. Another technique that should be used in terms of the placement of vegetation should incorporate the idea of using vegetative filtration for water runoff. That is, when and where plants are desired, they should be placed in such a way that compliments those areas of the course which must be irrigated. As discussed in the previous section, vegetative filtration can have a huge impact on the quality of groundwater as it removes toxins from runoff before it percolates back into the ground. Furthermore, water filtration systems must be installed and used to help capture irrigation runoff. Where vegetative filtration cannot be used, mechanical filtration systems such as sand and gravel filters can help protect the quality of groundwater.

In terms of irrigation, all public parks and schools in Palm Springs use recycled water. With this infrastructure already in place, it would not be difficult for the City of Palm Springs to require golf courses to use recycled water for irrigation. This would require investment on behalf of the City of Palm Springs in terms of extending the recycling water lines to golf courses, but it is not out of reach especially for those golf courses located in central Palm Springs close to the schools and parks.

In return for cooperation with the new city programs and policies, the city should offer to endorse those participating golf courses by providing funding for advertisements and the marketing of the new environmentally conscious golf courses. This will help the business side of those golf courses, it will help to further market Palm Springs as a more sustainable city, and it will facilitate economic growth for the city.

Department of Sustainability and Smart Growth

It is my recommendation to the City of Palm Springs to establish a municipal department dedicated to sustainability and smart growth as a way of achieving the aforementioned goals and policies. The new department should be divided into multiple divisions, each responsible for one facet of sustainability. Necessary divisions of such a department may include, but are not limited to, Water Conservation, Energy Conservation, Recycling and Solid Waste Reduction, Marketing and Education, Irrigation and Urban Runoff, and Air Quality. Each division should have its own city liaison(s) on staff with the city, who are qualified to work and act as professionals in their respective divisions. Furthermore, various taskforces should be established within the department

and across the existing divisions. For instance, a golf course taskforce might include representatives from the Water Conservation, Marketing and Education, and Irrigation and Runoff as well as council members, community members, representatives from the Department of Water and representatives from golf courses.

The creation of a new department responsible for the research, implementation, marketing, and enforcement of sustainable programs and policies gives the City of Palm Springs the best chance of becoming a more sustainable city. The department will represent the Palm Springs' commitment to becoming more sustainable as well as the accountability that the Palm Springs is assuming in terms of becoming a more sustainable city.

Conclusion

Palm Springs is a much different place than it was during the days of Nellie Coffman's Desert Inn resort. Although the city is still characterized as a small, quaint town with great mountainous views and desert landscapes, Palm Springs has experienced development at a rate which is not conducive to sustainable growth. For this reason, it is in the best interest of the City of Palm Springs to establish a plan for smart growth and sustainability. The best way to take on this objective is by making a commitment to sustainability and smart growth through the creation of a municipal department that will be held responsible for protecting the environment, natural resources of the area, and most importantly the quality of life for the residents of Palm Springs.

Bibliography

Books

- Ainsworth, Katherine. *The McCallum Saga: The Story of the Founding of Palm Springs*. Palm Springs: The Palm Springs Desert Museum, 1996.
- Bailly, Antoine S., Philippe Brun, Roderick J. Lawrence, Marie-Claire Rey. *Socially Sustainable Cities: Principles and Practices*, London: Economica, 2000.
- Bish, Robert L. and Robert J. Kirk. *Economic Principles and Urban Problems*, Englewood Cliffs: Prentice-Hall, Inc. 1974.
- Black, Thomas J. *Downtown Retail Development: Conditions for Success and Project Profiles*. Washington D.C.: Urban Land Institute, 1983.
- Bogert, Frank M. *Palm Springs: First Hundred Years*. Palm Springs: Palm Springs Heritage Associates, 1987.
- Bogert, Frank M. *View from the Saddle: Characters Who Crossed My Trail*. Palm Springs: ETC Publications, 2006.
- Bright, Marjorie Belle. *Nellie's Boardinghouse: A dual biography of Nellie Coffman and Palm Springs*. Palm Springs: ETC Publications, 1981.
- Bryden, John M. *Tourism and Development: A Case Study of the Commonwealth Caribbean*, Cambridge: University Press, 1973.
- Burayidi, Michael A. *Downtowns: Revitalizing the Centers of Small Urban Communities*. New York: Routledge, 2001.
- Burke, Tony. *Palm Springs: why I love you*. Palm Desert: Palmesa, Inc, 1978.
- Carley, Michael and Ian Christie, Managing Sustainable Development (London: Earthscan Publications, 2000) pp 29.
- Cobb, John B. *Sustainability: Economics, Ecology, and Justice*, New York: Orbis Books, 1992.
- Dodson, Ronald G. *Sustainable Golf Courses*, Chapter 1 "Sustainable Golf and the Environment," New Jersey: John Wiley & Sons, Inc. 2005.
- Frieden, Bernard J. and Lynne B. Sagalyn. *Downtown, Inc. How America Rebuilds Cities*. Cambridge: The MIT Press, 1989.

Green, Jessica F. *The Politics of Participation in Sustainable Development Governance*, Tokyo: United Nations University Press, 2006.

Hawtree, F.W. *The Golf Course: Planning, Design, Construction & Maintenance*, New York: E. & F. N. Spon, 1983

Levy, John M. *Contemporary Urban Planning*. Upper Saddle River: Pearson Prentice Hall, 2006.

Managing Downtown Public Spaces. Chicago: American Planning Association, 1984.

Merchant, Carolyn. *Green Versus Gold: Sources in California's Environmental History*, Covelo: Island Press, 1998.

Moran, Edward. *The Global Ecology*, New York: The H.W. Wilson Company, 1999.

Nadarajah, M. and Ann Tomoko Yamamoto, *Urban Crisis: Culture and the Sustainability of Cities*, Tokyo: United Nations University Press, 2007.

Niemann, Greg. *Palm Springs Legends: creation of a desert oasis*. San Diego: Sunbelt Publications, Inc, 2006.

O'Meara, Molly. *Reinventing Cities for People and the Planet*, Worldwatch Institute, 1999.

Porter, Douglas. *Downtown Linkages*. Washington D.C.: Urban Land Institute, 1985.

Rosen, Sherwin. *Studies in Labor Markets*, Chicago: The University of Chicago Press, 1981.

Stabler, M.J. *Tourism Sustainability: Principles to Practice*, New York: CAB International, 1997.

Whelan, Tensie. *Nature Tourism: Managing for the Environment*, Washington DC: Island Press, 1991.

Scholarly Articles

A. Scott, "Smart Growth in Canyon Country: Challenges and Opportunities in Moab, Utah" (UEP Senior Comps, Occidental College, 2008).

Bernard Frieden and Lynne Sagalyn, *Downtown, Inc. How America Rebuilds Cities* (Cambridge: MIT Press, 1989), pg 5

F. Herbert Bormann, Redesigning the American Lawn, “Environmental Costs,” Yale University Press, 2001, pp. 67-70.

Sen, Amartya, “What did you learn in the world today?” *American Behavioral Scientist*, volume 34, pp 530-48, 1991.

Newspaper Articles

Benjamin Spillman, “Decision on critical habitat funding stirs anger,” The Desert Sun (Local B1), Monday, June 2, 2003.

Jehan Seirafi, “Bet you didn’t know,” *The Desert Sun*, Desert Today Page D1, December 16, 2005.

Kristen Mack, “Falls Church Turns to the Future: Council gets ready to vote on city center redevelopment plan,” *The Washington Post*, February 25, 2008, Metro, B01.

Marie Leech, “Developer in Escrow with plaza owner Excel,” *The Desert Sun*, June 7, 2001, Local B1.

Nadia Villagran, “Developers unveil mall plans,” *The Desert Sun*, October 5, 2001, A-Section A1.

Pricer, Jaime. “Our history: Innkeeper’s daughter pioneered city’s tourist season.” *The Desert Sun*, August 11, 2008, Local, B3.

Stefanie Frith, “American Heat rolling this weekend,” The Desert Sun Local B1, October 9, 2008.

Stephanie Frith, “Fears of gang violence loom over biker event,” The Desert Sun Local B1, June 26, 2008.

Waveney Moore, “Retirement home owner plans to buy, raze church,” *St. Petersburg Times*, February 6, 2008, Local & State, 4B.

Films

The Open Naturally, short video, produced by R&A Golf Course Committee, 2008.

Prickly Pears Documentary, “Frank Bogert.” Palm Springs Public Library.

Others Documents

“City of Palm Springs General Plan.” City of Palm Springs, 2007.

John Gelhard, “Reclaimed Water: A Responsible Way to Conserve,” Heaviland Enterprises, Inc.

New Zealand Golf Technical Fact Sheet, “Sustainable Golf Course Design,” NZ Sports Turf Institute.

Interviews

Brian Strahl, Member of Historic Sights and Preservation Board, Interview March 7, 2009.

John Raymond, Director of Economic Growth, City of Palm Springs, interview October 15, 2008.

Rochell Saunders, Former Member Parks & Recreation Commission, interview March 5, 2009.

Websites

Agua Caliente History & Culture. “History & Culture: Overview.” Agua Caliente Band of Cahuilla Indians. <http://www.aguacaliente.org/default.aspx?tabid=57#overview> (accessed November 28, 2008).

Air & Radiation, “Ozone,” United States Environmental Protection Agency, <http://www.epa.gov/ozone/>, visited February 18, 2009.

Air & Radiation, “Particulate Matter,” United States Environmental Protection Agency, <http://www.epa.gov/particles/>, visited February 18, 2009.

American Heat, “Palm Springs, Ca,” Road Shows, http://www.road-shows.com/american_heat.php, visited March 2, 2009.

City of Auburn, “Auburn Downtown Partnership,” City of Auburn, NY, http://auburnny.virtualtownhall.net/Public_Documents/AuburnNY_PLanning/auburndowntown.

City of Berkeley Resolution, “Eliminate Anthropogenic Sources of Dioxin Pollution,” adopted September 14, 1999.

City of Berkeley Resolution, “Eliminate Anthropogenic Sources of Dioxin Pollution,” adopted September 14, 1999.

Community Development,” United States General Accounting Office, 1999, <http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=gao&docid=f:rc99087.pdf>.

- Council Action, "City of Berkeley Resolution No. 60.196-N.S Text," City Manager James Keene, adopted September 14, 1999, <http://www.thecre.com/ntp/resolution-berkeley.html>.
- City of Palm Springs Visitors. "City Profile." City of Palm Springs. <http://www.ci.palm-springs.ca.us/index.aspx?page=30> (accessed November 28, 2008).
- City of Santa Monica, "Construction and Demolition Debris Ordinance #1996, December 19, 2000," http://www01.smgov.net/swm/documents/waste_plan_form.pdf.
- City of Santa Monica, "Construction and Demolition Debris Ordinance #1996, December 19, 2000," http://www01.smgov.net/swm/documents/Waste_Plan_Form.pdf.
- Council Action, "City of Berkeley Resolution No. 60.196-N.S Text," City Manager James Keene, adopted September 14, 1999, <http://www.thecre.com/ntp/resolution-berkeley.html>.
- The Experience, "Botanical Gardens," Parkland Golf & Country Club, <http://parklandgolf.wcicomunities.com/experience/amenities/sports-club#5>, visited April 1, 2009.
- "Filtration Stormwater Controls," Stormcon, Denver 2006, <http://rpitt.eng.ua.edu/Publications/StormwaterTreatability/Filtration%20Woelkers%20et%20al%20Stromcon%2006.pdf>
- Green Power Program, "Residential Green Power," Pasadena Water and Power, <http://www.ci.pasadena.ca.us/waterandpower/greenpower/default.asp>, accessed April 8, 2009.
- How to Naturescape, "Traditional Landscaping v. Naturescaping," PlantNative.com, http://plantnative.org/how_intro.htm#tlvn, visited March 29, 2009.
- The Indian Canyons Ancestors. "Walk In The Footsteps of Our Ancestors." The Indian Canyons, <http://www.theindiancanyons.com/Ancestors.html> (accessed November 28, 2008.)
- Mary Kay Clunies-Ross, "Berkeley Residents Urged to Join City in Water Conservation," Public Information Press Release, <http://www.ci.berkeley.ca.us/ContentPrint.aspx?id=3422>.
- The O'Donnell Golf Club History, "A History of O'Donnell Golf Club," The O'Donnell Golf Club, <http://www.odonnellgolfclub.com/palmspringshistory.html>.

- The Office of Sustainability and the Environment, “About the OSE,” City of Santa Monica, <http://www01.smgov.net/epd/about/index.htm>, accessed April 7, 2009.
- Onboard Informatics City Data. “Business Palm Springs, California.” Onboard Informatics, <http://www.city-data.com/business/econ-Palm-Springs-California.html> (accessed November 1, 2008).
- Onboard Informatics City Data. “Palm Springs, California.” Onboard Informatics, <http://www.city-data.com/city/Palm-Springs-California.html> (accessed November 1, 2008).
- Onsite Wastewater Treatment and Reuse, “Sand/Gravel Filter,” AgriLife Extension Texas A&M System, http://ossf.tamu.edu/sand_gravel_filter.html, visited April 4, 2009.
- Our City’s Programs, “Zero Waste,” City of San Francisco Department of the Environment, http://www.sfenvironment.org/our_programs/overview.html?ssi=3.
- Palm Springs Aerial Tramway History, “History of the Tram,” Palm Springs Aerial Tramway, <http://www.pstramway.com/history-tech/history-detail.asp>.
- Palm Springs Aerial Tramway Tram Weather. “Tram Weather: Historical Averages.” Palm Springs Aerial Tramway, <http://www.pstramway.com/cams-weather/weather-detail.html> (accessed November 28, 2008).
- Palm Springs History. “History.” City of Palm Springs. <http://www.ci.palm-springs.ca.us/index.aspx?page=115> (accessed December 1, 2008).
- Palm Springs History. “The Valley Today.” PalmSprings.com, <http://www.palmsprings.com/history/today.html> (accessed November 28, 2008).
- Palm Springs Life Media. “Annual Events.” Palm Springs Life Magazine. <http://www.palmspringslife.com/media/Palm-Springs-Life/Desert-Guide/Calendar-of-Events/Palm-Springs-Popular-Events/index.php> (accessed November 28, 2008).
- Palm Springs Life Media, “Golf Courses,” Palm Springs Life Magazine, <http://www.palmspringslife.com/media/Palm-Springs-Life/Golf-Guide/Annual-2006/Golf-Courses-of-the-Coachella-Valley/>.
- Palm Springs Municipal Code, “Provisions,” <http://www.qcode.us/codes/palmsprings/>.
- Palm Springs – South Coast Resource Area, “Notable wildlife found in BLM’s Palm Springs-South Coast Resource Area,” Bureau of Land Management, http://www.blm.gov/ca/st/en/prog/wildlife/watchable/wf_palmwild.html.

Palm Springs Website, "The History of Palm Springs," PalmSprings.com,
<http://www.palmsprings.com/history/today.html>.

Plastic Shopping Bag Information, "What are the environmental impacts of plastic bags?"
Wisconsin Department of Natural Resources,
<http://dnr.wi.gov/org/aw/wm/recycle/issues/plasticbagsFAQ.htm>, visited March
22, 2009.

Residential Programs & Conservation Rebates, "Water Efficiency Rebates," Pasadena
Water & Power,
<http://www.ci.pasadena.ca.us/waterandpower/Rebates/default.asp>.

Residential Water Programs in Santa Monica, "No Water Waste Ordinance, SMMC:
7.16.020, adopted April 14, 1992," The Office of Sustainability and the
Environment, http://www.qcode.us/codes/santamonica/index.php?topic=7-7_16-7_16_020.

Riverside County Elections, "City of Palm Springs Municipal Measure," Riverside
County, <http://www.election.co.riverside.ca.us/eresults/29/ElectionResult.htm>.

Stormwater Utility, "What are Grassed Infiltration Swales?" Spokane County,
<http://www.spokanecounty.org/StormWater/content.aspx?c=1779>, visited April 3,
2009.

Water Forum Conservation, "Water Conservation Plans," City of Sacramento Water
Forum, http://www.waterforum.org/PDF/APPEN_J.pdf.

Waste Management, "Construction & Demolition Waste," City of Santa Monica Office
of Sustainability and the Environment,
<http://www01.smgov.net/swm/business/cd.htm>.