An Environmental and Historical Study
of the Nipomo Mesa Region

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Introduction

This is an exploratory study of the Nipomo Mesa and the impact humans and time have had on changing the landscape. Through such a study we can gain a better understanding of the symbiotic relationships different people have had with the land and how the landscape expressions can have lasting affects centuries or more into the future. When humans gained substantial numbers on the planet they left their mark on the land as they sought out resources for survival. In the Middle East the beginning of cultivation and population expansion ultimately led to a degradation of the land that remains apparent today in roaming sand dunes where cedar groves once stood. In Africa, fire usage by humans expanded grasslands and on the American Great Plains human-induced fire turned forests into vast grasslands.

Within my local area of examination I will bring awareness to the changes that have occurred and will continue to occur as people’s relationship with the land evolve. I hope to expand the research by exploring what the environment was like before humans arrived and what types of resources were present in order to make survival in the region possible. Likewise, the exploration of the first peoples ability to survive in the area will be a good base on what the land and vegetation had to provide. This would include climate, water sources, soil structure, and vegetation that afforded sustenance for animals and humans alike. With this approach I will reveal the differences between modern usages of these resources compared to different peoples of the past. Furthermore, with the passage of time an expansion of previously unexploited resources has developed and will also be explored.

California has been influenced by many different people of varying ethnic and economic backgrounds from all over the world. With these diverse groups came different land use practices and cultural beliefs unique to them that conversely either built upon previous people’s efforts or swept them away entirely to start anew with their own particular adaptive practices. In analyzing these changes it may be possible to draw conclusions on how modern land use practices are over-exploiting the resources and possibly provide a better conception of more sustainable practices. In recent decades there was an oil spill that contaminated and damaged the local environment. This led to a proposal for creating a wildlife refuge to protect the flora and fauna from further encroachment by those looking to exploit the land rather than work it in a more balanced fashion. There is also an oil refinery that can be seen at night from every part of the region in the form of an orange glow given off by the floodlights that illuminate the massive amount of steam rising from the facility. I’m sure the first native peoples of the area could not possibly imagine the changes that would occur over the coming years. The population including the City of Nipomo is approximately 16,000 people, a number probably unfathomable to the first people in the area. Ultimately, with this investigation of the Nipomo Mesa region I hope to enlighten myself and others to the ways humans have transformed the area since the first native peoples inhabited the land all the way up to modern times.
Locational and Physical Setting

First, we must define the physical boundaries of the area being studied. The Nipomo Mesa is located west of the US Hi-way 101 which is also defined as the western half of the city of Nipomo (see Figure 1). The northern portion of the mesa is also within the limits of the city of Arroyo Grande as shown by the dotted line on the map. Its geographical coordinates are at 35° 02’ North and 120° 31’ West. Most traveling through the area can visualize the clearly defined elevated boundaries of the Nipomo Mesa on the south, west and north sides. The east side is less defined and merges with the Dana Foothills which are the southernmost edge of the Santa Lucia mountain range. From the lower elevations surrounding the mesa it simply looks like a steep sloping mountain range rising approximately 350 feet. In fact this raised area is somewhat uniform in height with an approximate slope ranging from 9 to 30 degrees and spans an area of approximately 21 square miles. The landform that is the Nipomo Mesa was formed by westerly winds blowing and forming sand dunes over 10s of thousands of years. In the past 10,000 years the mesa was stabilized by vegetation. Prior to that, the area was defined by wind erosion and flooding (L.S.A. Associates, 2006).

Black Lake canyon is the east-west ravine bisecting the upper third of the mesa. The formation of the canyon is testament to the flooding and erosional susceptibility of the mesa soil. Within this canyon bogs and swampland contrast with the relatively dry sandy soil that makes up most of the mesa. The Oceano soil series encompassing most of the mesa are of the loamy sand type. Thickness can range from 150 to 250 feet below the surface. These deep soils are highly permeable and support a natural vegetation of brush (Manzanita, California sagebrush, Goldenbush, Chamise and Lupine), annual grasses (Fescue, Brome, Wild Oat, and Soft Chess) and some scattered hardwoods (Blue and Live oak) (Ardoin, 2004). These vegetation types reveal the nutrient content of the soil with their existence relying heavily on the seasonal winter/fall rainfall (November through April). There were also willow trees, cottonwoods and sycamore that today still cling to the remaining riparian areas in the countryside. The Mediterranean climate makes for a relatively long dry season throughout much of the year with warm, mild dry summers. Annual rainfall is approximately 14 inches during moderate winters. The unique landmass that makes up the Nipomo Mesa can produce a microclimate compared to that of the surrounding areas. While the lowland valleys can be socked in with fog the mesa, at the same time, can be sunny and 10 degrees warmer.

Native Peoples

The name “Nipumu” or “Nepomah,” is a Chumash word with meanings that include ”house-place,” “village,” or “the foot of the hills.” The mesa area has long been inhabited by native people’s most likely beginning around 10 thousand years ago, the end of the last Ice Age, although there is some evidence to suggest even earlier (~13kya)(Ardoin 2004). The most widely accepted hypothesis of how the first arrivers came to the area is over the Bering land bridge from Siberia. Another lesser accepted but nevertheless exciting hypotheses suggests they came by sea, perhaps around the North Pacific or from the Polynesian or southern Asian islands. However they arrived, the first peoples did not merrily survive, they thrived within the natural world and forged an
existence intertwined with the land and sea. The rising sea level following the end of the Ice Age made for abundant estuarial environments that were utilized between ~10,000 and 6,650 years ago. Their survival relied heavily on these marine resources. Ranging between 6,650 and 3,350 years ago evidence shows that the climate became drier and the native peoples changed their subsistence focus more toward land, hunting big game along with gathering seeds, especially the acorn (Oak seed) which was mashed into a meal substance (Anderson, 1992).

The Chumash People in particular are believed to have inhabited the area for at least the past 1000 years. Evidence is found in the dating of Chumash-style artifacts and tool-making technologies. The Chumash were successful enough in their hunting and gathering skills that like most California Indians they did not grow crops such as corn or beans prior to Spanish arrival. They instead subsisted on acorns (the main staple of their diet), other nuts, seeds, bulbs and leaves from native plants. They hunted game such as deer, antelope, seals, squirrels, rabbits and birds. These animals were hunted with small bow-and-arrows or flint-tipped spears (Rolle 1965). Like many native peoples they were also great fisherman and traveled out into the local bays in planked canoes. These vessels were constructed by sewn rope and tar pitch to make the boats watertight. What sets the Chumash apart from the other native peoples of California is their success as seafarers. Their houses were made of round thatched willow branches and brush (The Docent Project, 1991).

Social ties were flexible with limited differences in status and authority among the varying Chumash villages. There was no “chief” per say, rather only a moral authority whose opinion on matters would have held great weight. Conflicts among the tribes existed but were little more than squabbles and based more toward one-on-one brawls, nothing compared to that of warring tribes. Chumash women played a large role in maintaining the village unit. They were responsible for gathering and constructing storage facilities for their plant-based staples, the bulk of their diet. The different Chumash villages traded with each other to supply themselves with goods and maintain mutually beneficial relationships. Evidence has shown that they traded with people as far away as the Mojave desert mostly in the form of pottery, woven cotton blankets, hematite (a red mineral the Chumash used as ornamental paint) and other stone tools (Docent Project 1991).

Archeological evidence suggests that the mesa area was home to no more than approximately 60-100 individuals at any one given time. Evidence of their existence include flint shards and broken bits of shell revealing food preparation and tool-making. Owing to limited water resources native sites are found closer to the Nipomo Creek and Black Lake Canyon. With the stabilization due to vegetation growth on the large dunes that formed the mesa these ancient habitation sites are close to the surface revealing some answers into how these first people lived. Other noteworthy sites of nearby habitation include to the north “Pismu” (today’s Pismo Beach) and to the south “Lombo” (Lompoc). It should be stated that all along the coastal ranges villages of similar sizes peppered the entire area as shown in the map (see Figure 2). Their settlement patterns are quite revealing with native peoples coalescing all along the coastline and Channel Islands along with sparser placement of villages within the interior.
Figure 2, Chumash Villages, Archaeology and Ethnography Program, National Park Service, 1999.
The sea played a huge role in the daily lives of the Chumash, even to those villages on the mesa because on average it is less than a mile away from the majority of the region. The ocean would have been a life-giving resource in sparser seasons as it yielded clams, crab, mussels, snails and fish. The Native Peoples were extremely resilient and wasted little as their lives were intertwined with that of the natural world. There is testament to this symbiotic relationship with nature. Approximately 65% of their cultural items were made from plant material and unfortunately due to this much of their material culture has been lost to the elements. The mild climate demanded very few clothes. The men and boys of the Chumash and even earlier peoples would have rarely worn anything more than a strip of deer skin around their waists. In more severe weather they were known to cover themselves in mud, an ingenious adaptation to the rigors of the elements. The Chumash women and girls wore grass skirts and clothing woven from rabbit skins (The Docent Project, 1991).

Interesting accounts recorded by early explorers observed that the Chumash were excellent and resourceful hunters. One method is particularly interesting in that they would disguise themselves by wearing deer skins and antlers. The hunters, on all fours, would then cautiously approach the deer herd at which the leader would throw his spear followed by the others. Other hunters armed with bows and hid in the surrounding area to shoot at escaping deer. The slain deer would be skinned and dressed and taken back to the villages where the women would make jerky out of much of the meat. In times of plenty their method of living afforded them much leisure time. They enjoyed various games and sports to fill their days when food acquisition was not required (Docent Project.1991).

Another land use practice believed to have been utilized by the Chumash and other Native peoples is fire. Its use was believed to have served multiple purposes (Blackburn and Anderson). Burning vegetation was a way to funnel game toward a desired area and subsequently killed. Also, fire would have resulted in a park-like landscape in which game could be more easily seen. Furthermore, it also would have stimulated the growth of more desirable plant species used for subsistence and material goods. The burning of the underbrush and litter on the surface was also desirable in harvesting a healthy pest-free acorns. This practice would have burned off the old worm-infested acorns to leave a cleared surface for the next harvest to fall and easily gathered. It is also believed that this practice stimulated the growth and overall health of those plants utilized for housing and basketry (Anderson. 2006).

To what extent the Native Peoples altered the Nipomo Mesa with fire and other processes is difficult to say as there are few documented accounts and Chumash cultural memory have long since died away. The Chumash did not possess a system of writing although they were known for their designs, symbols and rock decorations. In the past this was a limiting factor in determining the evidence to which the Chumash had in their influence over the land. Although, there is plenty of evidence from the Mission Period that fire was used by the Chumash of the Santa Barbara region it is a reasonable assumption that their northern cousins would have likewise put to use the same practice. Owing to the land use practices by the Chumash, the Nipomo Mesa would have provided an environment where European peoples would have benefited.
Figure 3, El Camino Real, Gary Fredbug 2010
Spanish Exploration and Settlement

The first European expeditions to the area came by sea in the mid-16th century. During this time maritime exploration many voyagers were spurred on by the various crowns of Europe to find a northern sea passage through the Americas as a route connecting the Atlantic and Pacific Oceans. As we know today this is not possible although it was a driving factor in some of the first contacts between native peoples and Europeans. The first contacts were mainly of Spanish and English origins and did not result in any major settlements until the mid-18th century when English and British fur traders began establishing stations along the coast. These types of depots were sparse and as stated relatively limited contact took place with the native peoples. This is not to say there were not numerous records of these first contacts. In 1595 Sebastian Rodriguez made an observation from San Luis Bay of “many people on top of some bluffs.” He also noted that the people were “well set up, of medium height of a brown color, and like the rest go naked, not only men but women, although the women wear some skirts made of grass and of bird feathers. They use the bow and arrow, and their food consists of bitter acorns and fish. They seemed to be about three hundred in number, counting men, women and children, some of them with long beards with the hair cut round, and some were painted with stripes on the face and arms. The land seemed to be good as it was covered with trees and verdure (Rolle. 1965 p.66).”

Other explores wrote in their logs describing the native people as relatively benevolent and “inoffensive Indians” as stated by father Antonio de la Ascensión near the Santa Barbara coastline (Dewitt. 1979 p.123). His account of the Chumash also stated “They use bow and arrows and have their form of government. They are naked. They would have much pleasure in seeing us make settlement in their country.” These explorers described a fruitful and abundant land just lying in wait for the “civilized world” to christen it. It is in this retrospective consciousness that we see the collective mindset of the first Europeans toward the native peoples. In numerous letters and logged records we see the enthusiasm to inhabit this newly found land by Spain and to impose their idea of government control and imposed civilized life that would prove detrimental to the Chumash culture and similar native peoples of California.

It wasn’t until the later half of the 18th century when New Spain (modern-day Mexico) was busy evangelizing the native populations that construction of the California Missions in 1769. These incursions into California were also believed to have been spurred on by competition as England laid claim to most of North America along with Russian interests from the north Pacific. The Russian and British Empire also held ambitions similar to Spain in that they foresaw the massive amount of resources this vastly unexplored land had to offer. This competition inflamed by the domineering empires of Europe would lead to many problems back home as finances were stretched and ambitions thwarted (Rawls. 1998).

The 21 missions (established 1769 through 1823) in California were located some thirty miles apart (about a day’s journey on horseback)( see Figure 3). The three closest missions to the Nipomo Mesa were that of San Luis Obispo de Tolosa (founded 1772), La Purisima near Lompoc (founded 1787) and Santa Ines( founded 1804). Construction of the missions was aided by the local Chumash peoples. Some were forced into mission servitude. Some joined out of curiosity however all were persuaded by the Franciscans
into taking on Catholicism as a new faith and direction from their previous way of life. They were subjected to a theocratic system that was extremely regimented and wholly different from what they had previously known (Jackson, 1984). It was in this environment that the Chumash population declined due to diseases introduced in which they lacked immunity. Venereal diseases brought on through sexual exploitation were spread from soldiers and other men in the colonies to the native population. Likewise, the more confined compounds of mission life were actually less sanitary than previous village life. Chumash were known to burn their old dwellings periodically after prolonged habitation, but within the walls of the Missions health declined. The change in diet and lowered birthrates further corresponded to a declining population of which the native people on the Nipomo Mesa would have eventually been subjected to. A staggering statistic indicating the devastating extent affecting the native peoples is that during the entire mission period the native population from San Francisco Bay to San Diego declined 75% from 72,000 to 18,000 (Rawls 1998).

As travel among the missions increased over the years greater contact and influence over native peoples by Europeans took place. Being a relatively benevolent people the Chumash were seen as acceptable subjects in which to bring under Catholicism. Introduction into the mission-life changed the native people who survived in various ways. Some were taught skills and were transformed into farmers, artisans, Spanish cowboys (vaqueros) and choral singers. Yet, the overall experience for the Chumash in the Nipomo area would have meant almost complete obliteration and destruction of their culture and population. Mission San Luis Obispo experienced numerous fires in the first couple of decades after its construction. Some were believed to be accidents while a few incidents were known to have been the efforts of native peoples attacking the mission. In one such case they were reported to have used fire-tipped arrows. This form of rebellion was an indicator that some native peoples did not welcome the type of rule imposed and likewise the subjugation of their culture. Within the environs of mission-life the native peoples were regarded as little more than children by many Spanish missionaries. They were made dependent upon the whole mission structure. Their clothing and their foods were all provided through the regimented structure of mission life. Their previous use of fire was halted by the missionaries changing the environment accordingly (Jackson, 1984).

The newly introduced livestock would have changed the landscape and led to lower populations among the native plant and animal species. For the Chumash who wanted to hold onto their old ways of life subsistence and survival would have become ever harder especially with new research suggesting that strong El Nino effects were reeking havoc on food sources (Jackson, 1984). This would have been a strong factor influencing the decision to stay on the land or to move into the missions where cultivated crops proved more abundant and reliable. Wheat, corn and barley were the staple crops of the missions with corn being the most important crops among San Luis Obispo and La Purisima Missions (Jackson). Through records we can also chronologically analyze the steady decline in crop sizes at the missions during this period and conclude this a population decline of the Chumash.

To further reaffirm the extent to which the Chumash were subordinated each mission had a presidio nearby with a garrison of soldiers. These presidios supported a small group of soldiers to maintain order and ensure security. This display of force
demonstrates how Spain’s secular rule was intertwined with religion and militarily might as force was used in the event Chumash converts ran away (Jackson, 1984). The soldiers would then be sent to bring them back. It is an interesting observation that during the revolts that took place most attacks were toward the soldiers and not the Fathers running the missions. During the mission revolts at La Purisima and Santa Barbara records indicate that the native people let it be known they meant the padres no harm (Rolle, 1965). Another form of Spanish settlement was the establishment of the pueblos. These small settlements were an attempt to further gain a foothold in California and legitimize the Spanish claim in the eyes of most European colonizers. It should be stated that there is no record of these Spanish settlements on the Nipomo Mesa and at this time of converting the Chumash the Mesa would have mostly been a relatively uninhabited area except for those traveling among the missions or perhaps a few bands of runaway natives. Modern day Hi-way 101 is an approximation of El Camino Real (The Royal Road) which connected the missions, presidios and pueblos during that time. Today this route travels through the town of Nipomo and runs along what most agree to be the eastern boundary of the mesa. This route is today a major highway showing that the most logical routes were taken in circumnavigating this newly claimed territory. It is also probable that this route was made navigable by native peoples practice of clearing the land through fire (Dana, 1960).

During the late 18th and early 19th century Spanish control of the area deteriorated. Even though the missions were set up with the plan that they would become secularized in the future that seldom happened to any great extent. Secularized settlement would not occur to a great extent until after Mexican independence in the 1830s. The Spanish King did not favor granting land to foreign settlers already in California. There were no more than 25 land grants appertained during the entire Spanish era and a population of only 1,200 settlers in 1800 demonstrated the lack of settlement interest (Dewitt, 1979). Spanish ambitions toward their outlying colonies diminished as problems mounted in their newly acquired territories and at home. The lack of sufficient military strength in the region led foreign visitors to note the weak control Spain truly held over the area. As a result many settlers began to fill cutoff from Spain and saw themselves more as Californians (or Californios) than Spaniards. The sentiment for independence rose among Californians as Spanish power faltered. In 1807 Napoleon Bonaparte lured the Spanish royal family to France where they were subsequently imprisoned. He appointed his brother as the new King of Spain which inflamed a rebellion. With such turmoil at home Spain had little strength to spare in holding onto far off colonies (Dewitt, 1979).

**The Mexican Period**

With Spain’s diminishing powers over its colonies independence movement and revolution grew far and wide. In 1810 the Mexican Revolution began with Miguel Hidalgo, a Catholic priest, rejected Spanish control and called for independence. The struggle continued until 1822 when the first Mexican Republic was declared. In that year the last flag representing Spain was lowered for the last time in Monterey and the Mexican flag bearing the snake and eagle were raised in its place (Starr, 2005). Mexican independence had its growing pains as the new country moved forward and tried to promote a constitution that would allow for a prosperous and hopeful future. The new
constitution was radically different from the hierarchical structure of the Spanish crown as promises of political and racial equality were considered a critical part of progress. Other changes influencing California were the permitting of free trade with foreigners, the continued secularization of the missions, and the increasing of rancho land grants. This increase of private land holdings would prove to be a pivotal moment in the future development of the Nipomo region. Foreigners willing to become naturalized Mexican citizens and amenable toward Roman Catholicism found California an appealing territory ripe for those with an entrepreneurial attitude, financial means and an appetite for adventure (Dana, 1960).

In 1837 the Mexican government awarded William G. Dana 38,000 acres encompassing the entire Nipomo Mesa region and some outlying areas including the northerly located Los Berros valley (see Figure 4). He had already proved himself a successful ship captain and entrepreneur establishing trade with China, India, and the Hawaiian islands. He first arrived in Santa Barbara in 1828 were he married Maria Josefa Carillo, a Spanish-Californian daughter of Don Carlos Antonio Carrillo, a provisional governor of the California territory. Spurred by the otter trade his first venture started in Santa Barbara by opening a store which would become a profitable investment. As the Dana family grew they looked toward the Rancho to start anew. With the aid of Indian employees they started the construction of La Casa de Dana. The lumber for the rafters and heavy framing was reported to have come from up the coast in the Cambria area and also the San Rafael Mountains near the Santa Ines mission. The adobe bricks for the home were made from limestone found a quarter of a mile east of the home and brought to the site by cart. Not a single nail was used in the construction, rather rawhide thongs and mortising held the framing together. Also, the roofing material was not the commonly seen clay S-tile, but was in fact made of tar. The lathe used was made of willow sticks hauled from Los Berros creek (Contreras. 1995).

The rancho in those days were mainly self sufficient. Manufacturing of household goods and personal affects were almost entirely made within the compounds of the Rancho with only the raw materials of some items brought by ships docked at local ports. Products made or finished at the Rancho included flour, soap, candles, brandy, lard, sugar, chocolate, cornmeal and other staples. Sugar was made from white beets first introduced and brought from the Oso Flaco area. Starch was made from the potato crops. Dyes were made from different roots found in the surrounding countryside. The Rancho even had its own shoe shop to outfit the family and employees. Furniture, clothing and other implements were skillfully made at Rancho Nipomo. Some of the work was fabricated by the Indian employees kept on by the Dana family. These Indians had obtained much of their skills from time living at the nearby missions. Charcoal was made from the nearby oak groves. The metal goods were constructed in the blacksmith shop along with plows, which were made of wood at the time. Dana was a leading factor to the introduction of the plow in California agriculture. He brought the idea from his youthful days back in Boston where he witnessed its construction and implementation. The acquisition of this new method in agriculture production made William Dana and Rancho Nipomo originator of horse-plowed crops in the area. There also would have been a large assortment of domesticated animals raised for food, dairy products and clothing (Jackson.1984).
Dana also utilized his massive landholding to raise cattle for export, with hides traded all the way to New England and Mexican merchants. The Dana Adobe continued to expand. As the family expanded construction of compound additions were ongoing. Five children born to the Danas died shortly after birth, a testament not only to the lack of medical knowledge, but also due to the harshness of living on the fringes of a developing region. Multiple fireplaces and candles kept the compound warm and lit. For those that survived they made a lasting impression on the area as they married and raised large families whose namesakes distinguished future landmarks and roads (e.g. Tefft, Thompson, Branch, Price, Carrillo, Burton, Robbins, Mallagh)(Jensen, 1012).

Figure 4, Rancho Nipomo, Jensen 2012.

The Dana Adobe would have been in the center near the bisecting river. This river is the Nipomo Creek and approximates El Camino Real (Today’s Hi-way 101). The larger river to the southeast is the Santa Maria River and runs along the southern bluffs of the mesa. The Dana foothills are shown at the top. Los Berros Creek runs along the top left. Black Lake Canyon is the small sliver entering the map from the west.
Hospitality to passersby would have been a necessity at this time. Records show that the Dana household was an Inn of sorts where travelers were welcomed and allowed room and board. It is probably due to this well known hospitality that William Dana was so widely respected. He held varying levels of office over the region during the areas time as a Mexican territory and afterwards as California won its independence and statehood in 1850. During the Mexican period Dana held the official office of perfecto of the district, which was the highest office the governor of California could grant any one individual. This honorable bestowment was testament to the good graces that Dana had earned (Dana. 1960).

As employees the relatively benevolent Chumash Indians displayed admiration and gratitude toward the Danas and Rancho Nipomo. They built their homes around the outskirts of the Rancho and were allowed greater freedom compared with their previous lives at the missions. Some tried to hang on to their ways of life prior to European contact. They were known to enjoy gambling, games and different sports. They used their old methods of outsmarting deer during hunts and taught the children how to capture quail with snares and nets. This was also done by chasing the coveys out onto the mesa where there were limited trees. There the quail would tire and could be captured. The children of the Rancho found this way of life especially exciting as historical memoires suggest a sense of freedom and wonderment in this new land (Dana, 1960).

Life in the region was not without danger though. The Tulare Indians from the San Joaquin Valley defended their rights to the land when Spanish exploration penetrated the interior. As a result they conducted many horse stealing raids even as far as San Luis Obispo County and Rancho Nipomo. It’s due to this underlying threat that the Dana Adobe was built upon an elevated area in the landscape to better observe any surrounding danger (Contreras.1995). Likewise, a cupola atop the Adobe allowed surveillance of the countryside and was used regularly by some members of the family. Records made at the time reported that if any raiding parties were seen the men would mount their horses and chase them back across the Santa Lucia Mountains.

Throughout the coming decades the landscape would change with the driving ambition of a few land holders with a hunger for wealth and a greater exposer to the emerging world economy. It would only be a matter of time before new forms of communication, transportation and economics would change the regions of California into more modern forms. By the 1880s much of the Rancho had been split among the Dana descendents and the first planning for the town of Nipomo began. This century would see great changes in the powers that governed California and the diverse influx of people that would soon find the chance of striking it rich too appealing to ignore.
Early American Period (1840-1900)

California at this time in history already exhibited a diverse array of people, ideas and differing visions for its future. The mid and later part of the nineteenth century would turn out to be another great time of change for California and similarly the Nipomo area. As American expansion and ambitions reached California many changes would occur in the area. Luckily for the Dana family they held good favor with the changing of governments. The United States declared war against Mexico on May 13, 1846. Tensions were exasperated through the instigation of the Bear Flag Revolt. This incident included a set of ragtag Americans eager for California’s independence arresting General Vallejo. The current flag of California is the same one they constructed with the title “California Republic” in hopes of perhaps becoming its own country. The United States had other plans for California though. The short Mexican- American war that affected California was relatively easy for the Americans with little blood shed (Dewitt, 1979).

In 1846 Colonel Freemont along with one hundred men and some Indians were traveling through the Rancho Nipomo area in the attempt to claim California for the United States. William Dana greeted the men as they camped nearby. They were in need of food and supplies that Dana eagerly shared. He gave them fresh beef and thirty horses. One thing to say about Dana is that he was good at reading the shift in power and took full advantage of opportunities to ensure that change would not end his ownership rights. He also knew the sentiment of other Rancho owners and told the Colonel the rancheros would welcome him (Dana. 1960).

It was after the conquest of California that Rancho Nipomo would become a stop in the state’s first regular postal route. Mail would stop semi-monthly in there trek from San Diego to the San Francisco area. Even with this more regular contact with the outside world the area still remained remote and news of certain world events could be as old as a year before reaching Rancho Nipomo. In the 1850s regular couriers would reach San Luis Obispo first, mainly by ship or stagecoach (Contreras, 1995).

The finding of gold at Sutter’s Mill in 1848 would lead to a massive influx of prospectors and accelerate population growth in California. It was at her statehood that California was divided into 24 counties. For so many new immigrants the promise of success went unfulfilled and resulted in a land teeming with vagabonds and wanderers of all types. For the criminal elements at this time opportunity would have been ripe and the records show it was a time when violence in the area was at its peak (Loomis, 2012).

It was also at his time that stagecoaches would have been used by those who didn’t travel by horseback. Even though the first Transcontinental railroad had been completed in 1869 its pacific terminals in use were at Alameda and Oakland. It wouldn’t be until the 1880s that the Pacific Coast railway would be constructed connecting San Luis Obispo along the valley western of the mesa and down to Los Olivos. This was used to transport agricultural freight from the Santa Maria Valley that became the agricultural breadbasket of the region in the later part of the 1800s. Agriculture as a means of economic pursuit was advantageous in the Nipomo area and the entire Central Coast. The Mediterranean climate provided an excellent climate for raising profitable crops and would stimulate future economic growth and settlement (Dewitt. 1979).

Along with cultivated crops beef production continued in the area even as Ranch Nipomo became subdivided among the Dana descendents. Another intriguing tale told by
Juan Francisco Dana was that of decimating the local wolf populations with poisoned meat. They would drag the contaminated hunk of meat behind a wagon so that the wolf packs would pick up the scent. At different areas they would cut pieces loose. In his memoirs he reported seeing twenty dead wolves at one time. Any loss to a rancher’s herd would mean money out of their pockets. Bears were similarly hunted and driven to meager numbers, as in the case of the Grizzly Bears outright elimination. Many of the rancheros offered rewards for killing bears and memoirs of Nipomo residents tell exciting stories of tracking and killing these ‘menacing beast.’ At this time the extermination of these predators would have collectively been perceived as progress in not only reducing threats to livestock, but also in providing a safer atmosphere for all inhabitants. The people of that period probably could not have foreseen a future where these animals would later become protected under federal law in an attempt to keep them from extinction.

The 1880s were a prosperous time for the landholders of the Nipomo area. With greater wealth came the need for more ‘stuff’ and the yearning for a more modern and civil lifestyle. For some, homemade goods were insufficient in an era of economic development. The founding of the city of Nipomo occurred in 1887 and streets and infrastructure began to rise from the countryside. The first general store was built east of El Camino Real and still stands today. Soon a number of other stores sprung up in the original heart of the city now known as “Old Town Nipomo.” In 1882 the Pacific Coast Railroad connected Nipomo to Arroyo Grande. Soon after there would be two hotels, a hardware store, a wagon and blacksmith shop, a meat market, three saloons and real estate offices (Jensen. 2012). Continued growth brought a railroad depot, a post office, a Wells Fargo bank and a newspaper office. Different water works projects were developed with varying degrees of success. One effort used a source spring near the foothills and a four inch pipe gravity fed to supply the burgeoning town.

Cattle and sheep dominated the livestock production in the area during the 1890s. Few fences actually designated the varying properties and personal animals were marked with the rancher’s unique brand to separate one grazing herd from the next. Rodeos were not only a time to brand the livestock, but also a social event in which families gathered for a time of celebration and reflection on their success and life in the area. Later, in the century beef production became less profitable and dairying became another industry to offset this. Pressures on the land also came from ranchers from the Arroyo Grande and Guadalupe areas who would allow their cattle to graze upon the mesa. Sheep had been introduced to the area during the Gold Rush from New Mexico and provided a variation from beef. Wool was used to produce blankets, clothing and other goods. At one time the Dana family had 18,000 head of sheep in the area. There must have been a tremendous stress on the land to sustain this many animals. The evidence is testified to by the attempts to lease additional grazing land in the outlying areas. As a result, 16,000 head were parceled out to other ranchers as far away as Santa Cruz. This desperate act was a financial disaster for those involved. After this failed venture by the Danas there were never more than 1500 head allowed as a safeguard against any future disasters (Contreras, 1995).
Middle American Period (1900-1945)

One of the distinguishing landscape characteristic of the Nipomo Mesa region is the towering eucalyptus groves. These massive trees are hard to miss while traveling through the area. They are, however, a non-native species to the area and the interesting story of their introduction began in this period. Some large groves had previously been planted in other areas of the state. Magazine articles claimed that eucalyptus tea and inhalants could cure many ails. They were given credit for stopping malaria in Bakersfield as the thirsty roots would dry up the moist breeding places of mosquitoes. In 1904, the United States government published a book that stated America was faced with a hardwood famine. Analysis conducted by the botanists and other researchers reported the need for a reforestation program to address the problem. This would prove an inciting factor in further changing the landscape of the Nipomo Mesa. Eucalyptus are native trees of Australia and Tasmania. Some 140 different varieties have been planted in California, but the blue gum species is dominant on the mesa. The first promoters of growing the trees were believed to be honest and sincere in that they believed the groves to be a good investment. In 1908 a couple of businessmen bought 8000 acres on the north end of the Mesa and set up the Los Berros Forest Company. They sincerely believed in the future of eucalyptus and sold land mostly to easterners. After the introduction of this new venture the shady opportunists moved in (Jensen, 2012).

Soon after there were hundreds of commodities and prospectors involved with eucalyptus in the state including timber companies, furniture companies, real estate companies and agents, eucalyptus oil companies and magazines promoting seed sales. Soon the sad truth about the eucalyptus’ true potential was discovered. The trees were not suitable for timber as the wood grains twist and fracture when cut. They were, however, perfectly suited to the climate and the sandy loam sand which dominates the mesa soil. Their growth rate is relatively fast with some fifteen year old trees reaching one hundred and ten feet tall. Unfortunately, for those hoping to turn a profit the eucalyptus trees are relatively limited to windbreaks, firewood and pulp. The customary plan was to plant the trees eight feet apart, which made for 680 trees per acre. In 1959, eucalyptus groves covered such a vast portion of the Nipomo Mesa that many believed them to be the largest planted area of eucalyptus in the world. (San Luis Obispo Historical Society Paper. 1959)

During the Great Depression in the 1930s land prices fell, but at that time few were buying. None wanted a land that could not make them money. However, there were still those hopeful that the land would be profitable as productive agricultural land. Agricultural development previously had been limited to the eastern part of the mesa where sediment from the alluvial foothills fanned out and provided greater nutrients compared with that of the sandy mesa. It was also during this time that the railways running throughout the area experienced financial trouble. The mainline of the Southern Pacific Railroad running along the western valley adjacent to the mesa was the only line existing in 1941. The smaller railways were torn up and used for scrap with the onset of WWII. The discovery of oil in neighboring Santa Maria also occurred during this period and would lead to the sprouting of different industries and processing plants one of which, a large oil refinery is still operating on the western edge of the mesa (Contreras, 1995).
As a consequence of an improving economy and technology the entire area began to experience change with the expansion of cultivated fields in the 1930s and 40s. Also, with the efforts of entrepreneurs such as R.C. Callender the mesa continued its transformation into an agricultural breadbasket. The countryside produced such food stuffs as tomatoes, peas, beans (beans grown on the mesa were bought by the federal government as a staple for allied forces in WWII), wheat, barley, flax, dairy products, apricots, prunes, citrus fruit along with many other types of fruit (strawberries in particular which are prominent in the area today).

Late American Period (1945- today)

It was in this post-war period that the Nipomo mesa would continue to evolve into the landscape we recognize today. This time also allowed a greater opportunity to acquire and settle the land because the larger plots were subdivided into more affordable lots. Agricultural production was continued and expanded. For example the successful Reed Orchard included 25,000 apricot, prune, and walnut trees. Other ranchers comprised another 35,000 trees owing to the soil which is surprisingly effective in the cultivation of many kinds of citrus, fruit and nut trees. These tree crops require only a moderate amount of labor and afford the businessman who pursued such ventures various levels of success (San Luis Obispo Historical Society Paper. 1965). Nipomo Nurseries was another successful company direct by S.A. Dana as president. As mentioned before the Dana name is very much alive in the region today. In recent decades retirees found the unique landscape an ideal place to invest and build their large-scale homes, many of which could be categorized as mansions. Black Lake and Monarch Dunes golf courses attract enthusiast of the sport to the area and include residential communities attracted by the great weather and beautiful landscape. The grandeur of these households is remarkable, yet there is a stark contrast between the wealthy and no so wealthy. It’s quite common to drive by a large estate with a perfectly landscaped yard, electric gate and huge windows meanwhile the next lot over is occupied by a single-wide trailer home surrounded by weeds. This stark contrast is hard not to notice as one visits the region today.

The census of Nipomo taken in 2010 showed a population of over 16,000 people many of who fall into the designated area of the mesa (Jensen, 2012). The area continues to grow and change as developers and investors still see great potential in the area. The region has subsequently experienced various zoning processes. Most of the northern portion of the area has been zoned for 1-, 2½-, 5-, 10- and 20- acre parcels. These lot sizes are more conductive to residential development. The southern part of the mesa allows 20- to 320- acre agricultural parcels. Many fear that urban expansion will lead to an increased need for police, fire protection, schools and roads costing residents additional millions of dollars. A recently finished underpass allows travelers of Hi-way 101 another exit toward the center of the mesa in an attempt to alleviate the vehicle congestion found in Nipomo.

Along with the development and higher concentration of homes have come numerous growing pains. Water is a large worry for residents and appointees of the Nipomo Community Water District. This agency was formed in an attempt to facilitate the water needs of Nipomo and its outlying regions. Nipomo Mesa residents receive their water from the natural underground aquifer known as the Santa Maria Groundwater.
Basin which spans 1.2 million acres in total. This aquifer spans under the mesa where thousands of dependent residents reside. More recent studies conducted by engineers and water experts have concluded that this single source of water is suffering depletion due to the high level of demand and withdrawal. The large Santa Maria River only flows after annual rainfall and yet the amounts are not enough. These studies have concluded that even without further urban development the community is using more water than can be replenished to the aquifer. In other words, outflow is outpacing inflow and times of lower rainfall are of great concern. One study suggested continued removal of the eucalyptus might in fact help the percolation of rainfall in its replenishment of the water table (S.S. Papadopulos. 2004).

A study on the Santa Maria River Valley showed that in the mid-20th century the aquifer experienced a 40-60 feet drop due to a long dry period and increased agricultural and urban demands. The 1970s and 80s saw a recovery in the aquifer as the Twitchel Dam was constructed. However, the replenishment provided an even greater expansion of development and agriculture production. There are indicators that another 10-year dry period like those of the mid-century, will prove problematic. Many residents on the mesa get their water from privately owned wells. As the water table drops, major reductions in the capacity for these wells to pump water will occur. This will lead to increased energy costs for pumping water (i.e., new deeper-drilled wells) and a greater risk for sea water intrusion (S.S. Papadopulos. 2004).

The newer home developments have been a source of contention during recent decades. Many believe that the developers cover the costs in upgrading the infrastructure needed to address congestion and the increased demand on services. The roads are becoming more heavily used and more dirt roads being paved over. The sleepy little town that many local residents remember a few decades ago has gone through some major growth spurts recently leaving many to wonder at what cost. The reoccurring problem always seems to lead back to water however. Studies consistently reach the same conclusions and this issue will have to be confronted sooner or later. Some suggestions in how to meet this problem have included the use of recycled water, an increase in supplemental water sources, implementing measures of conservation and limiting further development. As one can imagine this is a hotly contended subject as different parties vie for a resolution that will benefit them the greatest (S.S. Papadopulos. 2004).

Urban and rural settlement expansion have left plant and animal species with fewer habitats to call home. Growing up on the mesa I remember seeing the distinctive Horny Lizard (aka Horny Toad) many times. They looked like miniature dinosaurs that loved to burrow into the warm sand as a way to disguise themselves. I have not encountered any in at least ten years because the increased development has decimated their habitat. During rancho days the native grasses were decimated by the large cattle herds roaming over the mesa. Europeans introduced a few varieties of veldt grasses and many species unintentionally were introduced. These grasses still cover much of the open fields and rolling hills in the area. The mustard plants which cover the foothills were introduced by the early Spaniards (Ardoin. 2004). These early changes of the landscape have created habitats that many species have adapted to. Today many of these species are threatened or endangered. The Monarch butterfly is labeled as a special status species and roost in the upper levels of trees, especially eucalyptus, during winter travel. The California red-legged frog is a federally listed threatened species whose habitat has shrunk considerably.
in recent decades. As more roads and traffic crisscrossed the mesa available habitat has diminished. Unimpeded movement for most species is a thing of the past. The Sharp-shinned hawk is yet another special status species that has experienced diminished nesting habitats.

Many consider Black Lake Canyon as one of the remaining Mesa areas where human impact has intruded the least. At community meeting residents have voiced their opinions that the area should be protected from further development in order to protect this last piece of forest and wildlife. Skunks, coyotes, road runners and raccoons all use this remnant wilderness as refuge from the encroaching influences of man. Unfortunately, some areas in the canyon have been used for dumping of garbage, appliances, etc. and even cars. In exploring the area I was astonished to find at the bottom of the valley a peat bog with a few half sunken cars sticking out of the muck. Over the past decade efforts have been made to halt such activity with varying success. Surveyor’s stakes with ribbons marking future construction sites are one indicator of the continued expansion. Conservationists have been fighting to get the canyon protected for equestrian and pedestrian uses. On the very western edge of the mesa there is a 2,000 acre game preserve that conservationists hope to use as a template in for the protection of Black Lake Canyon (Brunin, 1981). Even when private land owners follow the zoning rules their land practices may negatively disturb the landscape.

The north-facing slope of the canyon receives minimal direct sunlight allowing oak woodlands to prosper and create a shady canopy for the fern and moss-lined surface. This landcover is also reproduced on the northern slope of the mesa. Here steep slopes have impeded development and further scarring of the land. The south-facing slope of Black Lake Canyon and the southern and western edge of the mesa is an area where dune chaparral and scrub bushes thrive. Black sage is prevalent wherever bulldozers have not yet scrapped the land barren. During the 1970s and 80s dirt biking was an activity commonplace on the mesa. Trails could be seen weaving in and out of the sagebrush leaving built up mounds indicating the sharp banking turns. Along both edges of Black Lake Canyon trails provide a unique scenery for those brave enough to ride them. Yet, as more housing projects gobbled up the land the open space required for such riding became sparser. More county paved roads also made riding dirt bikes freely across the mesa a thing of the past and more susceptible to fines.
The largest remaining Eucalyptus groves approximate 1.65 sq. miles out of the total 21 sq. miles that makes up the mesa. They are a good indicator of the level of development this region has witnessed throughout this time period. The area shown bisecting the upper part of the map is that of Black Lake Canyon (see Figure 5). This area is marked by steep slopes characterized by swamps and marshland in the lowland. The steep slopes have constrained endeavors to convert this area to agriculture or targeted for home sites. Large homes also pepper the top of the canyon with exceptional views of unobstructed sunsets. Southern Californians looked northward to an area free from bumper-to-bumper commutes. My parents were among these travelers and purchased a 20-acre plot on the northern edge of the mesa. They were among many investors that saw the potential to sell off subdivided lots for a profit. Owing to these processes more people have moved to the mesa with conflicting ideas on how the land should be managed. As a result, increased regulations are a source of conflict that commonly dominate council meetings and local chatter.

Conclusion

During this study we have followed a chronological timeline showing the great changes and influences humans have had on the Nipomo mesa region. At times it was necessary to expand the geographic scope to put into context the powers that would
advance the landscape into the one we recognize today. The early humans that called this
area their home must have found the landscape and climate of the mesa a welcoming
habitat compared to that of the bitter cold found in the northern part of the continent.
However they reached the region they soon flourished as avid hunters and gatherers
affording a life filled with leisure that many of us would envy today. Times would not
have been easy though as the area experienced periodic droughts that afflict
contemporary peoples as well.

The arrival of European explorers to the area would prove a catalyst for rapid
change as they imposed upon the first peoples their institutions of government and
religion. This uprooted the native people in a most devastating manner as their lives
became more regimented and controlled by hierarchal systems which they were not well
adapted. It also resulted in thousands of Native Americans dying of disease and hardship.
The Spanish and Mexicans created a network of pathway and settlement that would lay
the foundations for future settlement.

The Dana family cannot be overstated in their long ties and influence over the land.
The family saw the Nipomo mesa area as a relatively uninhabited area as most native
peoples would have been taken off the land by missionaries or had perished by new land
use practices. Much of the plant and wildlife species were decimated. Subsequent
generations saw the rise in beef production and the first introduction of cultivated crops.
Private production of goods was the only way early generations could accommodate their
growing needs before Nipomo’s growth spurt in the late 19th century. The town
resembled those of countless others in the West that would lay the infrastructure for the
city we see today.

Improved communication with the outside world connected Nipomo with the
booming cities of the east. Cultivation of crops would dominate much of the mesa even
as private ownership and division of the land increased. Since becoming a state,
agriculture has played a huge role in California’s economy and it was no different at this
time. Some ventures were more successful than others adding to the mesa’s unique allure
and economic diversity. The eucalyptus groves still standing are evidence to the
entrepreneurial nature of the people in their attempts to achieve wealth in “the land of
opportunity.” Today, developers look to make the most profit with the least amount of
investment. This has led to great contention and in the area as urban growth has added
strain on the natural resources.

As the land became increasingly less rural, local residents in recent times have
founded organizations in the attempt to preserve what little is left of the undeveloped
land. The extent to which peoples of past have already influenced and changed the
landscape is not well known. Long ago non-native species were introduced both
intentionally and accidentally and it is hard to find any remnants of the native plant life.

Agriculture remains a big part of the southern half of the mesa and has contributed
greatly to the change in the land. An attempt to utilize greater space for growing crops
resulted in the expansion to the very edge of the bluffs. As a result, erosion has washed
large section of the bluffs into the Santa Maria river valley during heavy rains. Similarly,
new construction means scrapping the land barren. Wind erosion has also changed the
landscape and is a concern for health reasons. A handful of organizations have
endeavored to counteract these negative effects through greater conservation. The
Nipomo Native Garden is one such area where the public can get a glimpse of the diverse variety of native plant life that once covered the entire Nipomo mesa.

It has been a goal of mine to expose the reader to a truly unique history the Nipomo mesa represents. It is a place that has a rich history intertwined with so many different peoples and environments. We have also seen the great changes that come with new people and land use practices over time. We see that transformation of the environment is a continual process not fully realized until examined in context. The map of the present day mesa shows the great extent in which the modern landscape has been changed (see Figure 5). The Nipomo mesa will continue to remain a region shaped by transformation and development.
Figure 5, Nipomo Mesa Present Day (USGS)
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