PART 4

Modeling Results

4.0 Introduction

The tables contained in Part 4 together with the Supplemental images, maps, figures and charts in the Appendix are the marrow of the modeling results gathered in this project. Preceding the images in this section is explanatory text that provides a companion narrative to the materials offered in the second half of the section.

There are six different scenarios explored for the future of the counties in question. The figures in the second half of this section use abbreviations to describe these scenarios. Table 1 below offers a description of each abbreviation.

Scenario Shorthand	Scenario Description
CZ100Strict	The coastal zone is 100% protected and all of the 2002 parcels enrolled in the Williamson Act remain so throughout the duration of the modeling period.
CZ50Strict	The coastal zone is 50% protected (i.e., SLEUTH provides a 50% resistance to development) and all of the 2002 parcels enrolled in the Williamson Act remain so throughout the duration of the modeling period. This scenario exists only for Santa Barbara County for reasons explained later in this Chapter.
CZ28Strict	The coastal zone is 28% protected (i.e., SLEUTH provides a 28% resistance to development) and all of the 2002 parcels enrolled in the Williamson Act remain so throughout the duration of the modeling period. This scenario exists only for Ventura County for reasons explained later in this Chapter.
CZ0Strict	The coastal zone is 0% protected and all of the 2002 parcels enrolled in the Williamson Act remain so throughout the duration of the modeling period.
CZ100NoWA	The coastal zone is 100% protected but the Williamson Act is abolished.
CZ50NoWA	The coastal zone is 50% (i.e., SLEUTH provides a 50% resistance to development) protected but the Williamson Act is abolished. This scenario exists only for Santa Barbara County for reasons explained later in this Chapter.
CZ28NoWA	The coastal zone is 28% protected (i.e., SLEUTH provides a 28% resistance to development) but the Williamson Act is abolished. This scenario exists only for Ventura County for reasons explained later in this Chapter.
CZ0NoWA	The coastal zone is 0% protected and the Williamson Act is abolished.

Table 1. Scenarios modeled.

Williamson Act possibilities either removed all Williamson Act protections (Abolition of the WA) or assumed permanent protection of existing parcels (Strict Adherence). The coastal zone possibilities correspond to percentage resistances encoded into the model within the zone. The mixture of these two dimensions allows for the eight different scenarios above, though there are only six for each county.

For urban growth runs, each scenario corresponds to a different excluded layer. There is no other difference amongst the forecasts. All were run with the same growth coefficients within the respective counties.

Since each figure and chart was crafted carefully to fit on each page, maximizing the size of the image yet efficiently taking up page space, the explanatory text for the results is in Part 4 while many figures and charts are in the Appendix.

4.1 Examining the past

In order to properly understand the effectiveness of the Coastal Act in the retention of agriculture, we must, of course, begin by examining the past. However, in all such similar endeavors we have been confronted with the difficulty of proving the counterfactual. In other words, we cannot know for sure what the coast would look like if the Coastal Act, along with all its regulations and commission oversight, had never been adopted. Since this is impossible, we decided that the next best option would be to examine the patterns of growth inside and outside the coastal zone both before and after the promulgation of the Act. By controlling for universal economic trends that could affect the county as a whole we can more specifically isolate native differences taking place along the coast as compared to non-coastal areas. For example, if the coast consumes available land (land not in government owned parcels or the Williamson Ac, etc.) at a rate twice that of the non-coastal areas before the Act but then afterwards consumes available land at a rate only 20% higher then there would be circumstantial evidence to suggest the Coastal Act had made a difference. The relationship, therefore, between coastal and non-coastal rates of urbanization before and after the Act is the criteria we are using to determine the efficacy of the Act.

4.2 Santa Barbara County

Supplementary Figures 1 through 4 display the County of Santa Barbara's coastal zone (or what would become the coastal zone) over four different time periods. Digital land use data in California often does not exist before 1984, the earliest year of data offered by the California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP). Therefore, we digitized the two earlier time periods (1954 and 1967) from aerial photographs. Aerial photographs do not exist for every year and every count has different years available. The years 1954 and 1967 were chosen for Santa Barbara County because 1954 is 22 years before the Coastal Act while 2002, the last year displayed, is 26 years after the Act. Therefore, 22 years before and 26 years after is the closest we could achieve to a symmetrical before and after study. The year 1967 was selected because that is the closest year we could obtain for a midpoint between 1954 and 1984, the third year examined in the study.

Lastly, we used the FMMP's 1984 land uses for the first two time periods as well. The only changes we made were the differences in urban growth. Therefore, the reader will notice no interplay in the first three time periods between the other types of land uses, i.e., grazing land does not become prime farmland or vice-versa. We chose this course of action for two reasons: first, these intra-farmland changes tend to occur more slowly than urban growth, and secondly, these nuanced differences are often impossible to decipher from an aerial photograph. Consequently, the only differences among the first three time periods are the growth of urban lands. The audience may also notice that there is a great change of land uses from 1984 to 2002. This is due more to the FMMP's unfortunate habit of frequently updating its mapping methods than to actual changes on the ground. Also, sometimes land that appears to convert from important farmland to grazing land has really done so because the land has lain fallow for three seasons. In these cases, nothing has changed on the ground but the map will make it appear so. Despite these caveats, these

are the best sources of data we were able to procure, render, and design. Therefore, when examining future differences in farmland types (i.e., much important farmland acreage converting to grazing land) keep in mind the data upon which this is predicated. The urban growth itself, on the other hand, is less caveat-laden and, therefore, should be emphasized more than the dynamism between farmland types.

Returning to the figures themselves, Supplementary Figures 1 through 4 display the coastal zone over the four time periods while Supplementary Figures 5 through 8 offer the entire county. These images are not only helpful for display purposes but they were also examined to ascertain the amount of urban growth in each time period. To keep consistency of method, we ignored the actual numbers used by the FMMP for 1984 and 2002, and instead used the numbers in our image analysis. We chose to do this because FMMP has no numbers for 1954 and 1967. Since we had to perform image analysis for the first two time periods, we remained consistent by also performing it for the last two years. Fortunately, the numbers FMMP has do not differ greatly with ours for 1984 and 2002. They have about a 5% inconsistency with each other.

In order to make the numbers useful we first compared the rate of urbanization for each time period both inside and outside the coastal zone. The rate of urbanization, in this research, represents the average percent urban consumption of available land between time periods. Available land changes between time periods are due not only to the before and after effect of the Williamson Act (it did not exist in 1954) but also the fluctuating acreage in the Williamson Act over the years.

Total	Urban	Prime	Statewide	Unique	Local	Grazing	Other	Water
1954	9556	83584	5222	23278	35935	653670	935836	4605
1967	25333	79174	5222	23259	35935	651446	926714	4605
1984	57671	72346	5222	23250	35935	645169	907490	4605
2002	65213	77731	8713	33944	24539	629353	907651	4543
Coast								
1954	2784	8641	1280	4418	1186	98707	61819	28
1967	3942	6660	1140	3652	981	81686	49619	28
1984	8323	3961	887	3026	766	67301	37588	47
2002	9320	3833	1103	2309	636	67551	36841	103

Table 2. Santa Barbara acreages 1954 to 2002

Coastal	Total	Yearly	%	Non-Coastal	Total	Yearly	%
1954-76	0.065347	0.00297	0.2970316	54-76	0.042456	0.00193	0.1929838
76-2002	0.099875	0.003841	0.3841363	76-2002	0.069441	0.002671	0.2670797

Table 2A. Analysis: Santa Barbara Average Yearly % Consumption of Available Land: Coast vs. Non-Coast

The numbers above suggest the Coast continued to consume available land at a rate roughly 50% higher than the Non-Coastal Area both before and after the implementation of the Act. The data for the year 1976 was assumed to be the numerical mid-point between the 1967 data and the 1984 data.

COAST		Urban	Prime	Statewide	Unique	Local	Grazing	Other
1954		1901	5902	874	3018	810	67420	42224
1967		2692	4549	778	2495	670	55795	33892
1984		5658	2705	606	2067	523	45969	25674
2002		6361	2616	753	1576	434	46103	25144
Retention	54 to 1976		0.6146	0.7920	0.7558	0.7362	0.7547	0.7053
SINCE CA	76 to 2002		0.7212	1.0876	0.6909	0.7273	0.9061	0.8443
	54 to 2002		0.4432	0.8613	0.5222	0.5354	0.6838	0.5955
Outside Coast								
1954		4626	51189	2692	12882	23734	379055	596978
1967		14611	49530	2788	13392	23875	389168	599090
1984		33707	46710	2960	13813	24022	394706	594177
2002		38147	50436	5193	21591	16314	383432	594330
	54 to 1976		0.9400	1.0675	1.0560	1.0090	1.0340	0.9994
SINCE CA	76 to 2002		1.0481	1.8069	1.5872	0.6812	0.9783	0.9961
	54 to 2002		0.9853	1.9289	1.6761	0.6874	1.0115	0.9956

Table 2B. Retentions of different Land types between years.

Note: 1976 data is assumed to be numerically halfway between 1967 and 1984 data.

As Tables 2, 2A, and 2B show, the relationship between urbanization rates inside the coastal zone and outside the coastal zone, remained stable both before and after the implementation of the Coastal Act. More precisely, the coast consumed its available land at a rate 50% higher than the non-coast both before and after passage of the Coastal Act. (Greater pressure for development near the coast could explain the higher rate of agricultural land conversion.) Consequently, circumstantial evidence suggests the Coastal Act has not made an appreciable difference on the rate of growth along Santa Barbara County's Coast. An alternative explanation is that Santa Barbara County adopted regulations that closely resemble Coastal Act policies and provisions, and that therefore, any difference between the coastal zone and inland parts of the County that might be attributable to the Coastal Act is diminished. Also, as far as retention is concerned, in nearly every category, the difference in retention rates of various types of farmland actually becomes more disparate between coastal and non-coastal areas after the implementation of the Act. (See Table 2-B) Nevertheless, three different scenarios have been selected for future Coastal Act administration: no more development allowed along the Coast, 50% resistance, and 0% resistance. Though research suggests the third scenario is the most likely, the reader has the flexibility to examine each possible future administrative possibility.

FMMP DEFINITIONS OF IMPORTANT FARMLAND CATEGORIES (CA DOC)

Important Farmland Categories

About 90% of the FMMP's study area is covered by US Department of Agriculture (USDA) modern soil surveys. A classification system that combines technical soil ratings and current land use is the basis for the Important Farmland Maps of these lands. In areas where no soil survey is available, a series of Interim Farmland definitions have been developed to allow land use monitoring until soils data becomes available.

Important Farmland Map Categories

The colors and letters above are used to depict categories described below. The minimum mapping unit for all categories is 10 acres unless specified. Smaller units of land are incorporated into the surrounding map classifications.

Prime Farmland (P) Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Farmland of Statewide Importance (S) Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Unique Farmland (U) Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

Farmland of Local Importance (L) Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

Grazing Land (G) Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres. Due to variations in soil quality, smaller units of Grazing Land may appear within larger irrigated pastures.

Urban and Built-up Land (D) Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Other Land (X) Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

Water (W) Perennial water bodies with an extent of at least 40 acres.

Figure 1: Timeline of key legislative events establishing the different approaches to agricultural land preservation in California.

4.3.4 South Coast

CARPINTERIA VALLEY (Totally inside the coastal zone)

This community is unique in that it lies completely within the Coastal Zone. From 1954 to 1967 urbanization spread along the coast and inland, consuming nothing but Prime farmland. Nevertheless, most of the land in Carpinteria was still in farming. By 1984, though, development existed almost continuously along a thin strip of coast from Carpinteria to Santa Barbara, with the urban envelope pushing farther inland, and with increasing acreage of Prime farmland being converted to urban uses. However, between 1984 and 2002, according to data provided by FMMP, it appears as if very little additional development took place in Carpinteria. At this time period urban land appeared to be one third of the land in the area, with Prime farmland comprising another third, and Other Land as well as other Important Farmland together bringing another one third of the total land. Since FMMP, as discussed previously, somewhat altered its scheme for classifying land, there are changes between land use classes from 1984 to 2002. Nonetheless, the various thirds given above overall remain fairly constant.

GOLETA (Inside and outside the coastal zone)

In 1954 urban Goleta consisted of what is currently called "Old Town," the Santa Barbara Airport, a token acreage of development on the military base transitioning into UC Santa Barbara, and another small piece of development in an older section of the Isla Vista community. The rest of the surrounding lands were principally Other Land, with a significant amount of Important Farmland to the northwest and less to the Northeast. Unique Farmland (orchards) and Grazing lands lay in the foothills to the north of Goleta Valley. With the passage of time, the Prime Farmland to the Northeast was consumed by the expansion of Old Town Goleta. New developments to the Northwest appeared by 1967 and began to convert the mix of farmland types there while University expansion gobbled the Other Land acreage along the ocean. Seventeen years later, in 1984, tremendous growth is seen Goleta, as with all other areas of the County. Most of the Important Farmland in the northwest and northeast is converted, creating an unbroken corridor of development between Goleta and Santa Barbara, which also sprawled. The period 1984 to 2002, however, reveals far less change than the previous two time periods. Though some of this change is obscured by updated methods used by the FMMP, certain trends can still be discerned. First, Other Lands in the northwest were urbanized to a big box mall and affiliated suburban development.

SANTA BARBARA (Inside and outside the coastal zone)

By far the largest development in 1954, Santa Barbara is the capital of Santa Barbara County and was settled nearly two hundred years before the beginning of our time period analysis. Most of the land surrounding the city was classified as Other Land. To the Southwest is the Mesa, with slopes steep enough that much of it resisted development until the second time period (1967 to 1984). Much of the rest may have been low-density rural development (ranchettes) or other vacant or otherwise undeveloped lands. Since Santa Barbara was already a venerable town, there were not valuable farmlands adjacent as they had long since moved farther from the city. However, with the ocean to the south and the steep slopes of Los Padres to the North Santa Barbara, the city faced natural constraints. Therefore, by 1967, it had grown only 30 to 40% mostly by moving west along the coast and pushing farther into the foothills of the Santa Ynez Mountains. A few interspersed developments appear between Goleta and Santa Barbara during this time while others already present expanded. Santa Barbara's story of development had largely been told by 1984 since it had utilized most of its land that lay between the mountains and the sea. During this time Santa Barbara doubled in area and sealed the breach between itself and Goleta, creating an unbroken expanse of development. Despite the implementation of the Coastal Act, significant portions of undeveloped Santa Barbara that lay in the jurisdiction of the coastal zone were nonetheless developed. The following 18 years yielded little additional development for Santa Barbara, with the exception of additional development along the coast of Summerland.

4.3.5 Lompoc Valley

LOMPOC (Outside the coastal zone)

In the northwest portion of the Lompoc Valley, lies the city of Lompoc. In 1954, Lompoc was already a sizable development that rivaled other conurbations in the County, with the exception of Santa Barbara itself. Surrounded on three sides by Prime Farmland, Lompoc seemed ripe for a collision between growth and agricultural interests. By 1967, Lompoc had exploded into the croplands it abutted, rather than into the more sloped grazing lands to the south. However, by 1984 growth had slowed in Lompoc, with steep slopes to the south and recently contracted Williamson Act lands to the west and east constraining expansion. Consequently, a great deal of infill occurred in this time period, along with a few small satellite developments. By 2002, Lompoc had managed to expand northwards and consume most of the available prime farmland there. However, the Williamson Act prime farmland to the west (as well as the east, beyond the ribbon of Other Land) remained a barrier to westward sprawl.

4.4 Ventura County natural constraints

Though Santa Barbara County contains a high proportion of land that is either federally owned or too steep to develop (which are often the same areas), Ventura County's proportion of land that is either *de jure* or *de facto* off-limits to urbanization is even higher. Only around 10 to 15% of the County is flat enough for most types of development. However, flat valleys in the far north of the County are located in the Los Padres National Forest and are, therefore, obviously excluded from such consideration. Therefore, the ocean to the south, Los Padres to the north, and interspersed areas of steep slope between form the natural barriers to development in Ventura County.

4.4.1 Ventura and Oxnard (Both partially within the coastal zone)

San Buenaventura, or Ventura, is the oldest community in Ventura County. Nevertheless, by 1945 Port Hueneme (Naval base) and Oxnard, though not agglomerated at that time, had a total amount of developed acreage greater than Ventura. Both Port Hueneme and Ventura were developed along the seashore, with Oxnard farther inland. Ventura's surrounding area was far more mountainous than Port Hueneme and Oxnard's, which would affect their respective degrees of development over time. In 1945, Ventura had already begun to snake its way through the narrow pass that Route 33 now occupies while also marching east into the greater valley. Growth west and northeast was not possible due to slope concerns.

By 1963, Ventura had doubled in area, mostly by expanding east into the nearby plain. At the same time, Oxnard had grown south, forming an aggregate urban area with Port Hueneme. Both communities enjoyed a certain amount of leapfrog development into the plain, as spontaneous growth occurred beyond the contiguous boundaries of past development, though Oxnard did not face the topographical impediments of Ventura. In Ventura's case, most of the acreage consumed between 1945 and 1963 was Important Farmland. Oxnard, on the other hand, consumed mainly grazing land in its expansion. To the southeast, along the Coast, the Point Mugu Naval Air Weapons Station was developed during this time.

Twenty-one years later Ventura, having grown 50%, had caught up to nearby leapfrog development as well as increased the area of isolated communities farther to the northeast. Though development between 1963 and 1984 was mostly infill, significant amounts of croplands as well as grazing land were converted. Oxnard increased its urban land by approximately one third, again consuming mostly grazing land. Despite the implementation of the Coastal Act during this time, land was urbanized along the coast. Most of this land, however, was not agricultural but rather other land.

Unlike Santa Barbara County, most cities in Ventura County grew noticeably between 1984 and 2002. As for Ventura and Oxnard, they were no exception. Ventura expanded its urban footprint perhaps 10%, infilling the Prime and Statewide Important Farmland between the main body of the

city and its Northeastern appendage. Oxnard, meanwhile, having exhausted surrounding grazing lands, also expanded into Prime and Statewide Important farmland. However, it did grow approximately 20%.

Most communities in Ventura County grew noticeably from 1984 to 2002. Ventura itself consolidated by developing more interstitial gaps between urban areas, resulting in fewer patches. By 2002, the southern half of Route 33 was completely developed. Oxnard grew in a similar fashion, to the degree of approximately 30%, consuming solely Prime and Statewide Important farmland in the process. By 2002, the only feature separating Ventura from Oxnard was the Santa Clara River and the riparian vegetation along its banks.

4.4.2 Camarillo (Outside the coastal zone)

In 1945, the community of Camarillo consisted of a few, very small, developed areas with wide expanses of prime farmland and grazing land between them. In 1963, some of these communities became unbroken expanses of urbanized areas while new areas of growth erupted more distantly. This represented a nearly ten-fold increase in developed area, with prime farmland bearing almost all the collateral damage. By 1984, Camarillo had tripled in size consuming equal proportions of grazing land and prime farmland. Most of this development consisted of connecting the disparate pockets of development across the landscape and thus did not increase the radius of Camarillo's footprint. Eighteen years later Camarillo infilled to 50% of its 1984 size, converting equal parts Grazing Land, Prime Farmland, Unique Farmland, and Other Land.

4.4.3 Thousand Oaks, Simi Valley, and Moorpark (Outside the coastal zone)

At the end of World War II none of these three communities existed, or at least they boasted no developed land discernible by aerial photograph. By 1963, however, considerable development had taken place in the areas they presently occupy. While Thousand Oaks had begun to carve itself out of relatively flat but forested lands (Other land) that serpentinely wound throughout the mountains of the south, Simi Valley was firmly ensconced in a wide and nearly rectangular plain, where it had converted a considerable amount of Prime Farmland. Moorpark, smaller than the other two communities, emerged as three disparate conurbations, built upon what was previously Prime Farmland, distributed throughout another circuitously constructed plain just north of Thousand Oaks. A generation later, in 1984, Thousand Oaks grew nearly five-fold in size, consuming almost all of the natural lands (Other Land) left in its valley. This growth resulted in the joining of what had been far-flung communities into one large, inefficiently shaped conurbation. Simi Valley, over the same time period, nearly maxed out its own valley in a 600% increase by consuming all but a few very small pieces of prime farmland. Due to the shape of Simi's valley this resulted in a rather compact urban shape. Moorpark, in the meantime, leapfrogged into surrounding Prime Farmland and Grazing Land, tripling its developed land. By 2002, Thousand Oaks grew perhaps 20% more by forcefully cramming development into every last reasonably sloped piece of land within its city limits, resulting in an even greater spider webbing shape to development. Ninety percent of this expansion resulted in the conversion of Other Land while the remainder fell to Grazing Land. Simi Valley, previously compact in shape, faced the same predicament as Thousand Oaks when it sought to expand. Therefore, by 2002, tendrils of new development, around 10% more, extrude from the central city, gobbling up Grazing and Other Lands. Moorpark and its satellite developments remain scattered in 2002, yet it too had filled up much of its flatlands by developing Important Farmland. However, as opposed to Thousand Oaks and Simi Valley, it still had significant cropland acreage left in 2002. Lands to the west of Moorpark are mostly enrolled in the Williamson Act, which largely explains their escape from the bulldozer.

4.4.4 Fillmore (Outside the coastal zone)

Fillmore, a farming community along Route 126, already existed in 1945 as a small collection of developed land close to the road. By the early 1960s Fillmore had doubled in size and converted adjacent Prime Farmland accordingly. Twenty one years later, in 1984, it had only grown by 50%, modest compared to other Ventura County cities. In the process it continued to develop its Prime Farmland. In 2002, Fillmore had only increased in size another 20 or 30% and, again, pushed into nearby Prime Farmland. Unlike other areas of the County' Fillmore has plenty of easily developable flatlands (that are also Important Farmland) surrounding it on three sides. However, much, though not all, of that surrounding land is contracted in the Williamson Act and therefore, serves as a buffer against this expansion.

4.4.5 Santa Paula (Outside the coastal zone)

Sixty years ago Santa Paula was a reasonably large community immediately surrounded by Grazing land in a valley otherwise brimming with Important Farmland. By 1963, it had developed most of the surrounding Grazing Land by doubling in size. Expanding 50% more by 1984, the pattern of development began to march southwest through the Valley, this time consuming both Grazing Land and Prime Farmland. By 2002, this progression had been all but halted as a combination of Williamson Act lands and steep slopes bracketed Santa Paula on every side. From 1984 to 2002, Santa Paula grew only a negligible amount.

4.4.6 Ojai (Outside the coastal zone)

Even in 1945, the artist mountainous community of Ojai consisted of a few scattered collections of developed land. Other isolated developments dotted along Route 33 all the way down to Ventura. A generation later, Ojai and the other unincorporated settlements along Route 33 had at least tripled their developed land. In the process, however, they converted only Grazing Land and Other Land. From 1963 to 1984 these communities began the process of urban consolidation when they doubled their urban footprints. Again, though, only Grazing Land and Other Land was consumed. Over the next 18 years' Ojai as well as the other communities that lay along Route 33 hardly grew at all. Unlike Santa Paula, however, easily developable flat croplands within striking distance of Ojai were also unprotected by the Williamson Act, yet they still remained. This is an anomalous demonstration of restraint and probably has much more to do with the environmentally progressive local politics of the Ojai community than with lack of market opportunities.

4.4.7 Non-urban land use change

The most striking non-urban feature change in Ventura County is the increase in Farmland of Local Importance. This is mostly at the expense of Grazing Land. FMMP offers the following explanation in its 2000 to 2002 conversion report: "Farmland of Local Importance increased relative to Grazing Land as a result of the automated selection of qualifying soil units using SSURGO." A second important land use change, though less noticeable, is the increase in Unique Farmland throughout the County. FMMP explains: "Conversions to Unique Farmland due to the identification of nurseries with plants being grown in containers and corrections to soil unit identification throughout the county."

4.5 Urban forecasting

Supplementary Figures 9 and 10 display both the Slope and the Roads that are fed into our urban growth model, SLEUTH. The model only accepts grayscale Gif images so all input images are likewise rendered. For Slope, the whiter the pixel, the steeper the slope. Jet black areas are perfectly flat and, consequently, the most ripe for development. The road layer simply shows those major roads that are thought to direct development patterns. Although there are other input images as well, some of which are shown in later figures, these two are revealed because they help guide

the reader's sense of where development is most likely to take place. Without going into detail, SLEUTH takes into account four major factors when calibrating and predicting urban growth patterns: slope, excluded areas off limits to development, proximity to urban areas, and proximity to major roads. The past images show where growth has already taken place while Supplementary Figures 9 and 10 reveal Slope and Roads.

The following figures reveal an excluded layer along with the resulting forecast image for the year 2050. They progress from the most restrictive conditions to the least. The black areas are available for development. The light gray areas are Parks and Federal Lands. The darker gray areas are Williamson Act areas. The coastal zone appears in several different shades corresponding to that scenario's particular restriction. As resistance to development increases the coastal zone becomes a lighter shade of gray. The Williamson Act is either in effect or not so its color is either very gray or black. Not surprisingly, the resulting forecasts demonstrate greater growth as restrictions are lifted.

Examining the different excluded layers and outputs reveals insights into the importance that reviewing policies in conjunction with other policies can have. For instance, Carpinteria in the extreme southeast corner of Santa Barbara County is entirely within the coastal zone but also has lands in the Williamson Act. Therefore, it is only when both are removed that it loses all its prime farmland. If no development is allowed in the coastal zone, then Williamson Act policy changes have no effect. Conversely, lands in the coastal zone that are also in the Williamson Act are still off-limits, even if the Coastal Act were repealed. This is also reflected in the qualitative section on the Carpinteria Valley.

As far as total acreage is concerned, the South Coast of Santa Barbara County has a story that has already mostly been written. There is not a tremendous amount of acreage left to urbanize or protect. Santa Maria, in the northwest, on the other hand, shows not only tremendous growth in every scenario but also great variability depending on the Williamson Act. Though even with the unlikely assumption of persistence for all current Williamson Act contracts, the Santa Maria area still grows considerably, when those protections are lost the difference is sizable. This also is true for Lompoc, in the west, and the cities of Buellton and Solvang, and the town of Santa Ynez in the center of the County. However, percentage-wise, no city shows as much sensitivity to the removal of the Williamson Act as the city of Cuyama in the northeast of the County. Although strict enforcement of current contracts still results in some growth, the removal of the Williamson Act causes a loss of over two thirds of the Cuyama area's prime farmland.

Addressing the coast more specifically, the data and model suggests that pressure to develop the remaining land in the South Coast is tremendous. In the South Coast, when mixing the two dimensions of policy, it would appear that the Coastal Act has more relevance for the protection of the remaining farmland since much of the farmland on the South Coast is not in the Williamson Act. The Carpinteria Valley, as explained before, has the most farmland in the Williamson Act along the South Coast. It is likely that some of the remaining farmland would be converted to urban uses if California and local policies favoring retention of agricultural land were relaxed. To the extreme Northwest of the County it can be observed that the western fringe of the Santa Maria sprawl consumes the last piece of prime farmland along the coastal zone at a rate depending on the administration of the Coastal Act.

The Charts following the scenario outputs give aggregate numbers for the different scenarios. The charts do not offer anything surprising that the maps do not already reveal except for the changes in grazing land. In several scenarios the acreage of grazing land actually increases. To hearken back to earlier explanations, the model's land use predictions are driven by the FMMP's data. Since the FMMP data has a constantly evolving methodology and classification scheme that can be misleading, these intra-farmland changes should not be considered as gravely as the urban growth itself. Nevertheless, the numbers displayed give an FMMP data-based forecast for these land classes in the future.

As far as Coastal Prime Farmland, in the CZ0.Strict scenario (See Supplementary Figures 15 and 16 as well as Chart 4), over half is lost. However, removing both protections, CZ0.NoWA (See Supplementary Figures 21 and 22 as well as Chart 7), results in nearly all prime farmland disappearing along the Coast. The County as a whole, however, retains between 35 and 86 percent of its 2002 prime farmland, depending on the scenario. In those scenarios involving strict adherence to the Williamson Act, due to the land use change nature of the model, grazing land actually increases.

Table 3: Santa Barbara County Acreages and Retentions Across Time and Scenarios

TOTAL	Urban	Prime	Statewide	Unique	Local	Grazing	Other
1954	9556	83584	5222	23278	35935	653670	935836
1967	25333	79174	5222	23259	35935	651446	926714
1984	57671	72346	5222	23250	35935	645169	907490
2002	65213	77731	8713	33944	24539	629353	907651
Retention		0.9300	1.6685	1.4582	0.6829	0.9628	0.9699
NON-COAST	**Urban**	**Prime**	**Statewide**	**Unique**	**Local**	**Grazing**	**Other**
1954	6772	74944	3942	18860	34749	554963	874017
1967	21391	72514	3942	18841	34749	569760	877095
1984	49348	68385	3942	18832	34749	577867	869902
2002	55893	73898	7609	31635	23904	561802	870809
Retention		0.9860	1.9304	1.6774	0.6879	1.0123	0.9963
COAST	**Urban**	**Prime**	**Statewide**	**Unique**	**Local**	**Grazing**	**Other**
1954	2784	8641	1280	4418	1186	98707	61819
1967	3942	6660	1280	4418	1186	81686	49619
1984	8323	3961	1280	4418	1186	67301	37588
2002	9320	3833	1103	2309	636	67551	36841
Retention		0.4436	0.8620	0.5226	0.5358	0.6844	0.5960

	Urban	Prime	Statewide	Unique	Local	Grazing	Other	Water
CZ100Strict	99745	66677	5693	19007	5674	650026	900448	4417
CZ50Strict	106824	65324	4614	18539	4984	649504	897506	4391
CZ0Strict	107555	64562	5086	19055	5092	648443	897502	4391
CZ100NOWA	183283	32568	2072	12497	3118	620502	893234	4412
CZ50NOWA	190122	30118	1570	11371	1787	621580	890775	4365
CZ0NOWA	193619	27002	1232	10970	3248	620629	890595	4391

	Prime	Statewide	Unique	Local	Grazing	Other
CZ100Strict	0.857796	0.653407	0.559949	0.231223	1.032848	0.992064
CZ50Strict	0.840382	0.529556	0.546165	0.203112	1.032019	0.988823
CZ0Strict	0.830585	0.583737	0.561375	0.207526	1.030332	0.988819
CZ100NOWA	0.418989	0.237827	0.368162	0.127057	0.985936	0.984116
CZ50NOWA	0.387469	0.180159	0.334991	0.07281	0.987648	0.981407
CZ0NOWA	0.347373	0.141363	0.323192	0.132376	0.986139	0.981208

4.5.1 Santa Barbara County

SANTA MARIA VALLEY

In the Strict WA scenarios, Guadalupe doubles in size, consuming nothing but Prime Farmland. The City of Santa Maria remains straitened in the north but expands considerably in the South. Nevertheless, Santa Maria doubles in size under these conditions. However, most of the growth converts Important Farmland other than Prime as well as Grazing land due to the persistence of Williamson Act contracts on Prime farmland surrounding the city's northern reaches. Virtually all unprotected prime farmland is consumed in Santa Maria Valley in these scenarios. Altering the Coastal Protection in Santa Maria Valley has no effect on growth because those lands are still protected by the Williamson Act. However, abolishing the Williamson Act has a tremendous impact on the Valley. Urban land increases roughly five-fold from 2002 levels as the easily developable flat lands of the Valley convert from Prime Farmland to urban lands. Also, a great deal more growth takes place along US 101 when Williamson Act protections are removed. This is due to the positive reinforcement nature of growth. Urban development islands are attracted to major roads then higher growth increases this attraction. Despite the tremendous growth that occurs without the Williamson Act there are still some important farmlands that are predicted to remain in Santa Maria Valley. They are mostly spared due to their significant distance from urban areas and important roads. As for the farmlands to the west of Guadalupe, near the coast, without the protection of the Williamson Act, they are extremely vulnerable to development. Unsurprisingly, less strict implementation of the Costal Act leads to more conversion of Prime farmland along the Coast.

CUYAMA VALLEY (Outside the coastal zone)

In no region of the county is there a greater percentage growth than in Cuyama Valley. In Strict Williamson Act scenarios, the most restrictive, the community of New Cuyama leapfrogs northwest along the corridor of unprotected Grazing lands on either side of Route 166. Cuyama, to the east, grows little, even though it has easily developable unprotected Prime farmland to its south. However, new communities are predicted to arise throughout the Valley, particularly along the Route 33 corridor to the east of the Valley. This corridor consists entirely of unprotected prime farmland, much of which gets devoured in this scenario. Other communities are expected to spontaneously arise in other areas of the unprotected foothills as well as the unprotected prime farmland between New Cuyama and Cuyama.

With the removal of the Williamson Act, the Cuyama Valley undergoes even more profound growth than the Santa Maria Valley. The total amount of developed land in this Valley, under these conditions, is forecast to be thirty to fifty times greater than 2002 levels. The reasons for this astounding growth resulting from the removal of the Williamson Act are simple. The Valley has very little developed land in 2002, and this land is far outweighed by the amount of currently contracted Williamson Act lands. Furthermore, much of the non-contracted acreage to the south becomes too steep to build upon and, therefore, acts as a barrier to development. Also, State Highway 133 passes

through much of the Williamson Act lands and, once they are available, growth is strongly encouraged. Finally, the Valley has large areas of flat well-drained soils and the abolition of the WA allows their exploitation.

LOS ALAMOS (Outside the coastal zone)

With all Williamson Act contracts persisting into the future, the community of Los Alamos, rather small in 2002, is expected to double in size by 2050 while new communities are expected to appear along the US 101 corridor. There are large patches of non-Williamson Act lands along this corridor so they offered no resistance to development, which tends to be attracted to major roads. Most of this growth takes place on Important Farmland.

However, when Williamson Act protection is removed, development along 101 skyrockets to ten times greater than 2002 levels. This is especially true along US 101, where virtually all Important Farmland is consumed. The effect on other Important Farmland along the Creek to the west is largely assuaged due to its distance from US 101 as well as burgeoning Los Olivos.

LOMPOC VALLEY (Outside the coasta lzone)

Even with no parcels leaving the WA and no development in the Coastal Zone, Lompoc Valley experiences tremendous growth by 2050. With the communities of Lompoc, Vandenberg Village, and Mission Hills nearly doubling in size, they merge into a conglomerated metropolis. Also, an unnamed rural community to the east of Lompoc is predicted to triple in size, consuming surrounding unprotected grazing land. However, most of the land consumed in the valley is Other Land. Lastly, to the northwest of Lompoc is the Lompoc Federal Penitentiary. Though the penitentiary itself, an anomalous type of developed land, is unlikely to expand as indicated, the nearby lands, once freed, could offer considerable development opportunities abutting the penitentiary's perimeter.

With the removal of the Williamson Act protections, urban land more than triples in Lompoc Valley. The aggregation of Lompoc, Vandenberg Village, and Mission Hills is so complete that their boundaries are no longer clear. In addition, spontaneous growth occurs along Highway 1 to the southeast and the rural community to the east quintuples in size. By 2050, with out the Williamson Act, 80% of the 2002 Prime Farmland in Lompoc Valley will be developed.

4.5.2 Non-urban land use change

Throughout the County as a whole, great swaths of Farmland of Local Importance and, to a lesser degree, Unique Farmland give way to Grazing land. This should be regarded, however, in the context of the rubric set forth by the FMMP. "Grazing land," as the chart above indicates, does not mean crops have been replaced with cows necessarily. Rather, it suggests that much of this farmland may be left fallow for three or more seasons which would automatically convert it to grazing land in the view of the FMMP, e.g., "land that is suitable for the grazing of livestock." Prime Farmland, for the most part, appears far more resistant to this form of change. With farming becoming more difficult financially in the County, the abandonment of many of these less profitable and intensive operations (Farmland of Local Importance) to essentially open land (that is adequate for grazing but not necessarily being used for such purposes) is entirely possible. Unique Farmland giving way to Other Land in the foothills of the South Coast is another noticeable land use change.

The amount of urbanization involved in the various scenarios drives the degree observed in the changes enumerated above. Therefore, with the Williamson Act in place more Locally Important farmland escapes obsolescence into Grazing Land than when it is abolished.

4.5.3 Ventura County

Supplementary Figure 23 introduces the Ventura County portion of the analysis. As with Santa Barbara County, it begins with the past. For reasons explained earlier, we were forced to choose two earlier time periods than those provided by the FMMP for land use and urban data. For Ventura, we settled upon 1945 and 1963. Figures 23 through 30 offer snapshots of Ventura County's coastal zone as well as the County as a whole for the four different time periods. The same caveats offered for the Santa Barbara County maps also apply to Ventura County.

TOTAL	Urban	Prime	Statewide	Unique	Local	Grazing	Other
1945	5473	77347	39994	22674	12519	241080	778750
1963	25703	70568	39978	22650	12519	233652	772766
1984	78498	57240	39976	22649	12519	214196	752758
2002	105524	47552	35082	27798	17973	198039	745104
COAST	**Urban**	**Prime**	**Statewide**	**Unique**	**Local**	**Grazing**	**Other**
1945	1479	917	1202	277	40	3084	26763
1963	2515	767	1202	277	40	2293	21132
1984	4025	767	1202	277	40	1756	20158
2002	4687	610	1132	340	277	1568	19643

Table 4

COASTAL	TOTAL %	YEARLY %	NON-COASTAL	TOTAL %	YEARLY %
1945-1976	15.07006	0.486131	1945-1976	14.09075	0.45454
1976-2002	9.378764	0.360722	1976-2002	12.98698	0.499499

Table 4A. Analysis: Ventura County's Average Yearly % Consumption of Available Land: Coast vs. Non-Coast

The numbers above suggest the relationship between urbanization rates along the Coast and the non-Coast did indeed change after the implementation of the Act. As Table 4A shows the Coast went from consuming available land at a rate slightly higher than the non-Coast to consuming available land at a rate only 72% as high as the non-Coast. This led to the 28% Coastal resistance scenario for Ventura County, which, in this case serves as a Business As Usual scenario for Coastal Administration. The data for the year 1976 was assumed to be numerically 2/3 between the 1963 data and the 1984 data.

TOTAL	Urban	Prime	Statewide	Unique	Local	Grazing	Other
1945	5473	77347	39994	22674	12519	241080	778750
1963	25703	70568	39978	22650	12519	233652	772766
1984	78498	57240	39976	22649	12519	214196	752758
2002	105524	47552	35082	27798	17973	198039	745104
Retention		0.6148	0.8772	1.2260	1.4356	0.8215	0.9568
NON-COAST	**Urban**	**Prime**	**Statewide**	**Unique**	**Local**	**Grazing**	**Other**
1945	3994	76429	38792	22397	12479	237995	751987
1963	23188	69801	38776	22373	12480	231358	751634
1984	74472	56473	38774	22373	12479	212440	732600
2002	100837	46943	33950	27458	17696	196472	725461
Retention		0.6142	0.8752	1.2259	1.4180	0.8255	0.9647
COAST	**Urban**	**Prime**	**Statewide**	**Unique**	**Local**	**Grazing**	**Other**
1945	1479	917	1202	277	40	3084	26763
1963	2515	767	1202	277	40	2293	21132
1984	4025	767	1202	277	40	1756	20158
2002	4687	610	1132	340	277	1568	19643
Retention		0.6645	0.9419	1.2291	6.9278	0.5083	0.7340

Table 4B. Retentions of different land types between years

However, unlike Santa Barbara County, the Tables 4, 4A, and 4B reveal different conclusions about the effectiveness of the Coastal Act. As Table 4A demonstrates, the relationship between coastal rates of urbanization of available land and non-coastal rates has changed over the years. Before the Coastal Act the coast consumed available land at a rate slightly higher than the non-coastal area. After the Act, it consumed land at a rate 28% lower than the non-coastal area. Therefore, circumstantial evidence indicates the Coastal Act may be making a difference in Ventura County.

The modeling process, therefore, integrates a scenario that reflects this conclusion: CZ28.Strict and CZ28.NoWA. These both correspond to a business as usual assumption about future administration of the Coastal Act in Ventura County.

As for past retention of agricultural lands, the coastal zone actually retained a greater percentage of all categories of important farmland than the non-coast areas (Table 4-B). However, it did lose nearly half of its grazing land and a quarter of its other land, whereas the non-coast area retained much higher proportions of these two categories.

The future scenarios, as with Santa Barbara County, are all predicated upon 2002 roads, urbanized areas, and Slope (See Supplementary Figures 31 and 32 for Slopes and Roads). There are differences in the input data that can help explain why Ventura County grows less across certain scenarios than Santa Barbara County. First, Ventura County has a smaller amount of available land with a slope suitable for development (compare Supplementary Figures 31 and 9). Second, even when the Williamson Act is stripped away, many places in the Act are still too steep for de-

velopment. Third, Ventura County does not have as much land enrolled in the Williamson Act so its abolition has an effect less shocking than Santa Barbara County's.

In every scenario, Ventura County's future grazing land increases. Again, this should be understood in the context of the FMMP's methodology. In the coastal zone, even in the least restrictive scenarios, there is still some prime or statewide farmland projected to remain in 2060. (See Supplementary Figures 42 and 43) Though there is variability across the different scenarios for Ventura County they still do not show as much variability as Santa Barbara. For instance, Ventura County's scenarios result in 50% (Figure 34) to 80% (Supplementary Figure 43) increases in urban land. Santa Barbara County, on the other hand, leaps from 50% in the most restrictive scenario (Supplementary Figure 12), to an over 300% increase in the least (Supplementary Figure 22). Again, this different response to policy is for the reasons outlined above. As for retention of farmland, Ventura County ranges from 50 to 75% retention of Prime, with Local farmland taking the greatest percent losses. Santa Barbara County ranges from 35 to 85% retention of Prime with Statewide plummeting to a possible 14% retention and Local 13% in the least restrictive scenario.

The figures, tables, and charts in this section are numerous and lend themselves to a number of different conclusions. First, it would appear that the Coastal Act has made an appreciable difference in Ventura's coastal zone, but has not in that of Santa Barbara County. As noted earlier, the fact that Santa Barbara County's general plan and zoning are closer to Coastal Act policies than Ventura's plan and zoning inland, may offer at least a partial explanation of the lack of difference between coastal zone and inland rates of agricultural land retention. Second, policies working in concert are more powerful than policies working alone. For instance, even with the abandonment of one of these two polices, some farmland along the coast can still be spared due to the protection of the other. Third, though models do not truly tell the future, they are meaningful. By using state of the art techniques and the best data available (even when imperfect) a picture of the future can emerge. This can offer glimpses of where the highest pressure to develop will be. By understanding the effect of slope, roads, current development patterns, and excluded areas, we can make extremely educated guesses, if not about where development will be at least about where the next battle for control of farmland and development could be fought.

4.5.4. Ventura communities

Table 5. Ventura County Acreages and Retentions Across Time and Scenario

TOTAL	Urban	Prime	Statewide	Unique	Local	Grazing	Other	Water
1945	1479	917	1439	411	32	3084	26763	0
1963	2515	767	1202	277	40	2293	21132	0
1984	4025	767	1202	277	40	1756	20158	0
2002	4687	610	1132	340	277	1568	19643	0
Retention		0.6645	0.7866	0.8278	8.7597	0.5083	0.7340	

NON-Coast	Urban	Prime	Statewide	Unique	Local	Grazing	Other	Water
1945	3994	76429	38555	22263	12488	237995	751987	3156
1963	23188	69801	38776	22373	12480	231358	751634	3156
1984	74472	56473	38774	22373	12479	212440	732600	3155
2002	100837	46943	33950	27458	17696	196472	725461	3919
Retention		0.6142	0.8806	1.2333	1.4170	0.8255	0.9647	

TOTAL	Urban	Prime	Statewide	Unique	Local	Grazing	Other	Water
1945	5473	77347	39994	22674	12519	241080	778750	3156
1963	25703	70568	39978	22650	12519	233652	772766	3156
1984	78498	57240	39976	22649	12519	214196	752758	3155
2002	105524	47552	35082	27798	17973	198039	745104	3919
Retention		0.6148	0.8772	1.2260	1.4356	0.8215	0.9568	

Scenarios	Urban	Prime	Statewide	Unique	Local	Grazing	Other	Water
CZ100Strict	153724	35443	27898	20242	6523	201404	731836	3923
CZ28Strict	156949	34444	26971	20321	6650	201301	730782	3574
Strict	158035	34016	27169	19592	6808	201039	730409	3923
CZ100NOWA	181598	24847	18015	17896	6721	199787	728206	3923
CZ28NOWA	180869	23785	19893	17745	6428	199961	728388	3923
NOWA	181630	25259	18791	18054	6063	199684	727596	3915

Retentions	Prime	Statewide	Unique	Local	Grazing	Other
CZ100Strict	0.745352	0.795219	0.728175	0.362917	1.01699	0.982193
CZ28Strict	0.724352	0.768787	0.731026	0.369973	1.01647	0.980778
Strict	0.715352	0.774435	0.704796	0.378792	1.015149	0.980279
CZ100NOWA	0.522513	0.513504	0.643782	0.373942	1.008826	0.977321
CZ28NOWA	0.500179	0.567046	0.638365	0.357626	1.009707	0.977566
NOWA	0.53118	0.535643	0.649485	0.337341	1.008306	0.976502

VENTURA AND OXNARD (Partially inside the coastal zone) as well as Camarillo (outside):

Due to their partial inclusion in the coastal zone, Ventura and Oxnard are the only cities that are sensitive to Coastal Act administration. Therefore, particular attention is paid not only to this policy but its interaction with the Williamson Act along the coast. When no development is allowed along the coast and all Williamson Act contracts persist until 2060, Ventura and Oxnard still merge into one urban agglomeration. Though there is a river separating them, it and the surrounding vegetation are not protected according to our data and are, therefore, possible development sites. Though the two communities only increase their footprint 20 or 30 percent, it is mostly at the expense of Prime and Statewide Important Farmland. Of course, in this scenario, no development occurs along the coast.

When altering Coastal Act development resistance, the results differ only negligibly. Almost all of the land in the coastal zone under these conditions is either already developed, too steep to develop, in the Williamson Act, or under some other form of protection. The tiny fraction of acreage that does not fall under one of these categories is what is at stake under these circumstances, and so small patch of Prime Farmland is developed just north of Port Hueneme. Regardless of the

4.3 Communities of Santa Barbara County

It should be noted that, when discussing the communities below, the surrounding area outside current official city boundaries is assumed in the discussion to be part of that community, since that is where much of the growth takes place. Also, when describing its proximity to the coastal zone, this general area is what is considered, rather than the city limits themselves.

4.3.1 Santa Maria Valley

GUADALUPE (Mostly outside the coastal zone)

Guadalupe, though a smaller western neighbor of Santa Maria, was already settled in 1954. Then, it was surrounded to the east and west by thousands of acres of Prime farmland in the fertile Santa Maria Valley and to the north by the Santa Maria River, which also serves as a southern boundary to the County of San Luis Obispo. Though Guadalupe indeed grew throughout each time period, it barely more than doubled its developed area in the entire 48 years examined, unlike Santa Maria.

SANTA MARIA (Outside the coastal zone)

The single greatest change observed for a community from 1954 to 2002 must surely be Santa Maria. In the mid-1950s the urbanized area of Santa Maria paled in comparison to the tens of thousands of acres of Prime Farmland that literally surrounded the town in the fertile plain of Santa Maria Valley. Thirteen years later, Santa Maria had doubled in size while the nascent community of Orcutt to the south had exploded with enough urbanized land to rival Santa Maria itself. These two communities each doubled in size again by 1984 so that they nearly merged. Due to the Williamson Act contracts to Santa Maria's west and east, as well as the Santa Maria River to its north, its growth consisted largely of infill and southward expansion into Orcutt. By 2002, this merging was complete with Santa Maria abutting the Santa Maria River to the north and consuming virtually all unprotected Prime farmland in its reach while additional growth occurred along Highway 101. Nevertheless, a significant amount of unprotected Unique farmland was spared.

4.3.2 Cuyama Valley (Outside the coastal zone)

Development in Cuyama did not exist until the 1984 time period. From then until 2002 it did not grow very much but remained a small farming community surrounded immediately by Important Farmland and more distantly by Grazing Land. The community is bordered by foothills.

4.3.3 Santa Ynez Valley

BUELLTON (Outside the coastal zone)

In 1954 the community of Buellton had only a bare sliver of development. This sliver tripled by 1967 and by 1984 it more than tripled again. However, from 1984 to 2002, Buellton grew very little, most likely due to a high enrollment in the Williamson Act for surrounding lands. These lands act as a barrier to sprawl. Throughout the 48 year period the lands developed were largely grazing lands, though some prime and other important farmlands were converted as well.

SOLVANG (Outside the coastal zone)

Solvang is one of the oldest communities in the Santa Ynez Valley. In 1954 it was already settled. To the west lay prime farmland and to its east was farmland of local importance. To the northeast was Other land and to the southwest was Grazing land. From 1954 to 1967 this town grew only very little and consumed no Important Farmland. By 1984, however, it doubled in size and added new territory in a tendril carved into grazing land to the south. During this time, surrounding croplands were largely untouched. However, by 2002 some Important Farmland to the east of the city was converted.

scenario all three of these communities: Ventura, Oxnard, and Camarillo concentrate almost all of their growth exclusively on Important Farmland, most of it Prime and Statewide Important.

When abolishing the Williamson Act but keeping 100% Coastal Protection, development obviously increases. In fact, not only do Oxnard and Ventura merge together but so too does Camarillo with them both. (Santa Paula comes close to joining them.) All three of these communities roughly double in size and convert almost exclusively Prime and Statewide Farmland in the process.

THOUSAND OAKS, SIMI VALLEY, AND MOORPARK (outside the coastal zone):

These three communities are unusual for this study since they betray almost no sensitivity to the Williamson Act. In every scenario, for instance, Thousand Oaks and Simi Valley show the same pattern of growth. All that is at stake is a relatively small remaining area of Prime Farmland between northern Thousand Oaks and Camarillo. This does not suggest, however, that no growth occurs. Both Simi Valley and Thousand Oaks expand their developed land by approximately 20%. This is only accomplished, though, through a laborious foray up the surrounding slopes and hillsides. The model assumes flatter lands are more likely to be developed before attention is turned to less amenable steeper slopes. Nonetheless, even these intermediate slopes become exhausted and there is a point that is not crossed and development ceases in an area. This point is reached for both Thousand Oaks and Simi Valley in every scenario, regardless of policy. In the case of Thousand Oaks, it is entirely Other Land that is consumed while with Simi Valley it is Grazing Land. As for Moorpark, it follows a different pattern. Though it expands and consumes more of the valley in which it lies, interstitial steeper lands between heavy pockets of urban Moorpark are also developed due to intense pressure in every scenario (they are not protected). Therefore, even with the abolition of the Williamson Act, flat and easily developable and Important Farmlands to the east of Moorpark, yet still out of Camarillo's reach, escape conversion. However, croplands closer to Moorpark in that valley are developed without Williamson Act protection but their total acreage is small.

FILLMORE (Outside the coastal zone)

With permanent Williamson Act protections Fillmore is still predicted to double in size by 2060. Without them it is expected to quadruple. In either case an equal proportion of Other Land and Important Farmland is consumed. The same holds true for Piru, an unincorporated community east of Fillmore along Route 126.

SANTA PAULA (Outside the coastal zone)

Even with Williamson Act protections persisting Santa Paula still nearly doubles its urban footprint between 2002 and 2060; all at the expense of Important Farmland. Without the Williamson Act, however, it more than triples. Under this scenario all new development takes place on Important Farmland except most of it is Prime.

OJAI (Outside the coastal zone) (And Casitas Springs, etc.)

The community of Ojai as well as nearby unincorporated communities on or near Route 33 are projected to grow regardless of Williamson Act policy. With persistence, they roughly double in size, consuming mostly Other Land and Grazing Land. With its removal, the difference is small. Essentially, there is a bit more expansion onto Important Farmland adjacent to the communities.

LAND USE CHANGE

In every scenario, agricultural lands in every category yield a net loss of acreage. However, the different retention rates reflect not only urban conversion but also conversion from one farmland class to another. Therefore, the tremendous loss of Local Farmland is due far more to its conversion to Grazing land than to urbanization. Unique Farmland also loses significant acreage to Grazing land. Prime and Statewide Important farmlands owe most of their loss to urbanization, on the other hand. Grazing land shows great retention compared to the others due not only to the tremendous acreage it began with, vis-a-vis urban lands, but also because its losses are mitigated by its consumption of other farmland categories.