The Williamson Act:
The Impact of Program Funding Elimination on Agricultural Land Preservation in California

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Abstract

The Williamson Act's preservation of more than 16 million acres of both prime and nonprime farmland is essential in mitigating inefficient farmland development in California. Yet, its ability to preserve farmland has recently come under scrutiny with the elimination of its funding. Focusing specifically on a time frame of 2000 to 2012, the study sought to examine the patterns in the average acreage of contract non-renewal initiations and prime average acreage contract non-renewal initiations, both of which are key indicators of the program's ability to preserve farmland. The study utilized a mixed methodology that employs a historical analysis as well as an exploration of statewide and regional enrollment data. The results of the analysis and exploration determined that the subvention elimination did not cause a significant decrease in the amount of acreage enrolled. In fact, in one region, there was an increase in the retention of farmland. The study supplemented data derived from the Williamson Act Status Reports with a document review in order to explain the lack of results. As a result, the study concluded that the Williamson Act has maintained its ability to preserve farmland, thusly contributing the overall welfare of California.

I. INTRODUCTION

California is the United States' leading agricultural producer and yet the viability of its agriculture industry is in jeopardy. Prior to 2012, California's population grew annually by approximately 400,000 people and urban development sprawled into agricultural areas. Nearly a half million acres of farmland were converted to urban uses from 1990 to 2004. This trend continued until 2012 with the annual development of 50,000 acres of the remaining 27 million acres of the most productive (prime) farmland (AFT, 2012). Although California is currently witnessing an exodus of a large number of residents to different states, the rate of farmland conversion is expected to increase if California's population exceeds 50 million people by 2040. If changes in current development patterns and farmland policies do not occur, 2.5 million acres more of agricultural land are anticipated to be lost by 2040 (Gomes, 2002).

Farmland preservation has evolved into a critical issue in California as an increasing number of leaders and researchers begin to realize the severity of its inefficient conversion. Sokolow and Kuminoff (2001), leading scholars at the Agriculture Issues Center at University of California, Davis, argue that farmland conversion's "effects are more long-term than immediate, more visible in particular localities than statewide, and involve more than direct agriculture-to-urban changes" (p. 7). Many scholars and experts in the agricultural sector realize that present land use and agricultural preservation policies are not enough to secure the future of agriculture in California, but the dilemma remains in whether to create new programs or to improve upon current policies. In addition, the continuing loss of the state's best agricultural land narrows the options for potential land use and preservation policies, and creates a challenge of guaranteeing that the best farmland remains available for agriculture. The difficulty of this challenge increases because most of the state's cities, where more than 90 percent of the population resides, are located in close proximity to California's most productive farmland (Thompson, 2007).

Although it is inevitable that some California farmland will continue to be lost to development due to population increases and other uses in the future, it is crucial that the necessary steps are taken to impede future over-development of prime agricultural land. While there are a considerable number of California counties that have imposed both mandatory and voluntary open space and farmland conservation policies, farmland conversion data show these

well-intentioned policies are largely ineffective (Thompson, 2009, p.3).[1] One of the primary reasons for this is that local governments seldom appear to apply them to actual development proposals or measure their performance in preserving farmland. In addition, contention regarding the effectiveness of the statewide implemented California Land Conservation Act-better known as the Williamson Act- has intensified during the ongoing fiscal and budgetary crises. Once largely supported as effectively preserving farmland, this program is under great scrutiny as the issue of farmland preservation becomes more critical. Advocates of the Williamson Act contend that it still effectively preserves farmland. Opponents argue that the program is widely ineffective in inhibiting further growth on the fringes of cities. To an extent, however, both are valid arguments. While little has been done to limit the rate and volume of farmland conversion in the face of city expansion, it has been more effective in controlling farmland conversion and blocking development in areas remote from cities.[2] Thus, due to its extensive history as California's primary preservation program, a thorough investigation was necessary for gauging its ability to preserve and maintain farmland. This investigation aimed to determine whether or not the program should be continued.

The majority of farmland preservation research focuses on the rising concern with farmland conversion and the types of farmland preservation programs. While much of the literature also discusses farmland preservation programs and policies in the other countries, the Midwest, and the East Coast, there has been little effort to explore these programs and policies in California, namely the Williamson Act. The shortcomings in the literature inhibit a comprehensive understanding of the statewide legislation during a time in which it has garnered intense scrutiny. Therefore, this study investigates how the funding elimination impacted the Williamson Act's ability to preserve farmland throughout California by solely focusing on its largest component, the Land Conservation Act. To do so, the study utilized a historical analysis and exploration of enrollment by specifically examining the implementation of the Williamson Act in six regions throughout California from 2000 to 2012 (Appendix A & B). The purpose of this study was to develop a more comprehensive understanding of whether the program has

[1] The majority of the retention policies for counties and cities are included as part of their general plan, including but not limited to zoning for agriculture and agricultural districts.

[2] Two historic conditions contribute to the inability of the Williamson Act to limit farmland development in the path of city expansion: "(1) the reluctance of landowners on city edges, anticipating development opportunities, to enroll in the program; and (2) the ability of cities in the past to protest enrollments within 1 mile of their borders, effectively terminating such contracts when city annexation occurs" (Sokolow, 2010).

maintained its acreage enrollment in the last twelve years. In doing so, the study will demonstrate whether this program has preserved farmland from conversion and development, thusly preserving the agricultural integrity of California.

II. THE WILLIAMSON ACT

History

In 1965, the California Department of Conservation enacted the Land Conservation Act, one of the three current options in the Williamson Act, as its first effort to promote statewide, voluntary efforts to preserve farmland.[3] The legislation originated during the immediate post-World War II era when California's agricultural and open space lands faced dramatic increases in conversion pressures from population growth, and residential and commercial development (State of California Department of Conservation [DOC], 2012). Though initially lacking support, the program expanded from an enrollment of only 200,000 acres in 1967 to its current enrollment of 16.5 million acres (DOC, 2012).

Structure

The structure of the Williamson Act allows local governments to enter into contracts with private landowners with the purpose of restricting the development of specific parcels of agricultural and open space lands. Specifically pertaining to the Land Conservation Act component, the program incentivizes preservation through the relief of property taxes on farmland and open space land in exchange for a ten year annually (and automatically) renewed contract. [4] In return, landowners agree that they will not develop the land for another use. The Act bases the property tax assessments of contracted land upon generated income rather than the potential market value of the property and distinguishes between prime and nonprime farmland (DOC, 2012). The Williamson Act is estimated to save agricultural landowners between 20 percent and 75 percent in property tax liability each year (DOC, 2012). As a result, agricultural

[3] In the late 1990s, the program also expanded to include the Farmland Security Zone and Easement Exchange options of the Williamson Act. However, the amount of farmland enrolled in these options is significantly smaller compared to enrollment in the Land Conservation Act.

[4] In June 2011, Governor Brown enacted AB1265 to maintain the Williamson Act during the current financial crisis. Because the state no longer subsidizes counties for lost property taxes, counties have the opportunity to choose whether to utilize the bill as way to partially supplement the loses. The bill reduces contract times to 9 and 18 years so as recoup 10 percent of the participating landowners' property tax savings.

practices are more affordable when confronted by development pressures which results in the preservation of land that may otherwise be converted for other uses (Stewart & Duane, 2009). In return for implementation of the Act, local governments receive a partial subvention of foregone property tax revenues from the state.[5]

Landowners enrolled in the program also have two alternative options for rescinding their contracts. The first is through notice of nonrenewal filed by the landowner (DOC, 2012). Once filed, the nonrenewal process begins and over a course of nine years, annual tax assessments gradually increase until termination of the contract (DOC, 2012). The second option is known as a cancellation and can occur at any point in time during the contract. A contract cancellation must meet specific requirements in order for a city's or county's approval (DOC, 2012).[6] A cancellation fee of 12.5 percent of the unrestricted fair market valuation of the property is enforced upon the landowner, which is ultimately paid to the state's General Fund (DOC, 2012). The property tax reductions coupled with strict stipulations for cancellation serve as an incentive for those enrolled in the program to continue agricultural production on the farmland.

The Williamson Act relies upon collaboration between landowners, county governments and state officials to successfully achieve its original objectives of promoting food security, encouraging agricultural support industries, complementing regulatory efforts to curb sprawl, avoiding costly public facilities and services, and promoting quality and resource values (DOC,

[5] Counties received subventions until 2010 due to Governor Schwarzenegger's amendment to the program.

[6]The following cancellation stipulations are provided by the Department of Conservation (2012).
The board or council may grant tentative approval for cancellation of a Williamson Act contract only if it makes either public interest or consistency findings. In some cases, the contract or local government may require both public interest and consistency findings to be made in order to cancel the contract.

In order to find that the cancellation is consistent with the purposes of the Williamson Act, the board/council must also find:
(1) That the cancellation is for land on which a notice of nonrenewal has been served.
(2) That cancellation is not likely to result in the removal of adjacent lands from agricultural use.
(3) That cancellation is for an alternative use which is consistent with the applicable provisions of the city or county general plan.
(4) That cancellation will not result in discontinuous patterns of urban development.
(5) That there is no proximate, non-contracted land which is both available and suitable for the proposed use or that development of the contracted land would provide more contiguous patterns of urban development (GC §51282(b)).

In order to find that the cancellation is in the public interest, the board/council must find:
(1) that other public concerns substantially outweigh the objectives of the Williamson Act; and,
(2) that there is no proximate, noncontracted land which is both available and suitable for the proposed use, or, that development of the contracted land would provide more contiguous patterns of urban development (GC §51282(c)).

2012). Through this collaboration the Williamson Act has maintained its core purpose over the last 45 years in spite of its constant evolution and amendments. Yet, as the Williamson Act reflects the economic and political conditions of the times, it has come under great scrutiny as the state's dismal financial circumstances continue. Collaboration between stakeholders may no longer be adequate to sustain the Act under the straining financial pressures.

Despite its growth in enrollment from 200,000 acres in 1967 to its current 16.5 million acres, the Williamson Act has become a source of controversy over the years. Due to California's ongoing financial crisis, the program is in peril of termination or revision because, until recently, it relied upon funding from the state's General Fund. Although former Governor Schwarzenegger eliminated the program's subvention funding, Governor Brown recently revised the program with AB 1265 so that it continues to exist. Yet, although this is not the first time the Williamson Act has endured such circumstances, Sokolow (2010) notes that Governor Brown's revision has been the most extreme since its inception. While he did not restore the subventions, the governor restructured the program so that counties enrolled have the option of partially recouping losses by reducing property tax breaks to farmland owners by 10 percent in exchange for shorter conservation commitments from farmers. Many counties are currently evaluating whether they should continue to participate in the program since they are no longer receiving substantial compensation for property tax losses and are having difficulty recouping financial losses. Thus, with the Williamson Act's preservation of over 16 million acres, it is necessary to investigate how the subvention elimination has impacted program enrollment.

III. PREVIOUS STUDIES

INCREASING CONCERN REGARDING FARMLAND CONVERSION

Though the issue of farmland preservation is not new, the public's concern for the preservation of farmland has intensified with the expansion of many urban areas into previously agriculturally dominated landscapes.[7] Because literature regarding public demand for farmland

[7] It is crucial to understand that there are many ways in which to preserve and protect farmland. Farmland preservation may be either mandated or voluntary. In its voluntary form, farmland preservation involves the sale or donation of a "perpetual conservation easement by a willing landowner to a government agency or to a qualified, private non-profit land trust" (Daniels, 2004, p. 5). This form of farmland preservation relies on a legally binding contract to "preserve" land for farming uses.

The mandated forms of farmland preservation techniques are not always permanent; however, they do facilitate the protection of farmland for a period of time. These forms of farmland preservation techniques include

preservation has only gained momentum in the last 25 years, it is limited to only a few areas in farmland preservation studies. Studies have primarily focused on three main areas: examination of the public's willingness to pay to protect environmental amenity benefits provided by farmland (Halstead, 1984; Bergstom, Dillman and Stoll, 1985; Kline and Wichelns, 1994; Duke & Lynch, 2007), whether the public is willing to pay for farmland preservation programs (Kline and Wichelns, 1994; Nickerson & Lynch, 2001), and the examination of public attitudes towards farmland preservation (Furuseth, 1982; Duke & Lynch 2007). These studies generally find that while the public perceives farmland preservation as positive, there is wide variation in this perception and the public's actual willingness to pay for farmland preservation programs. Hence, people support farmland preservation but not always financially (Halich, 1999, p. 52).

Although the majority of previous literature focuses on financial aspects of funding farmland preservation, early research does not recognize specific objectives of public support. Recently, researchers have attempted to clarify the objectives and preferences of the public in its demand for farmland preservation. Moreover, despite the fact that Kline and Wichelns (1994, 1996) believe that those who support the preservation of farmland are motivated by some combination of agricultural and municipal objectives, this generalization is insufficient and limiting in its categorization of the values and objectives of public support. Instead, at the root of its support, the public recognizes that farmland produces more for society than food and fiber. Thus, a broader range of reasons for protecting farmland exists that include: environmental concerns, a desire to maintain open space, the preservation of rural economies and communities, and protecting local food supplies (Bunce, 1998; Tarpenning, 2002; Mariola, 2003; Roe, Irwin, Morrow-Jones, 2004). In particular, farmland is an essential source of rural amenities, including outdoor recreation, hunting and fishing, and the scenic views of pastures (Tarpenning, 2002). Although no one value dominates, exploring a variety of preferences has led researchers to conclude that the public's ultimate objective in supporting farmland preservation is to maintain access to it.

The significance of these values serves as a catalyst for increased preservation of farmland. The general realization that gradually developed over the years is that farmland

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but are not limited to use-value property taxation of farmland, low-density agricultural districts, and a governor's executive order to direct state infrastructure projects away from farmland (Daniels & Bowers, 1997, p. 13). Despite their preservationist implications, all of the mandated techniques can be changed by an act of the local government or state legislators.

conversion is irreversible. Thus, with the provision of rural amenities being such a significant factor, it was thought necessary to take initiative to protect farmland (Hellerstein, Nickerson, Cooper, Feather, Gadsby, Mullarkey, Tegene, & Barnard, 2002). Scholars note that states and local municipalities have adopted a variety of programs and policies to prevent the conversion of farmland, including but not limited to: right-to-farm laws, use-value assessment, conservation easements, and planning measures to reduce urban sprawl.[8] Furthermore, there are many forms of farmland preservation programs, ranging from the use of zoning to regulate land use in the private sector to programs that incentivize private land owners to continue farming (Hellerstein et al., 2002). Despite this array, however, successes in effectively preserving farmland vary by state.

Consequently, the literature also notes that with increased concern for farmland preservation, proponents seek new techniques when others are unsuccessful (Daniels, 1991). Researchers agree that the search for effective techniques to maintain land in agricultural use has frustrated planners, policymakers, farmers, and the public. Incentivizing programs such as those that provide property tax breaks are oftentimes overshadowed by increases in land value and the large sums that developers offer (Daniels, 1991; Nickerson & Lynch, 2001). However, regulatory mechanisms, such as agricultural zoning, are oftentimes unpopular with farmers because it restricts their use of the land without compensation (Daniels, 1991).

While state and local decision makers attempt to implement effective farmland preservation programs, little research is dedicated towards studying the specific objectives of decision makers. At the local level, much of early legislation has been driven by concerns over wasteful patterns of urban development in which farmland preservation was used as a growth management tool to regulate urban sprawl (Lehman, 1992; Bunce, 1998). This "urban centered" perspective on farmland preservation has become a recurring theme throughout local land use planning (Easley, 1982; Daniels & Nelson, 1986, Bunce, 1998). However, while urban sprawl initially was the most significant factor of early policy initiatives, the eventual emergence of farmland preservation as a public issue has been catalyzed more by concerns over the impacts of urbanization on agriculture itself. Currently, the public's primary concerns are affiliated with the

[8] Urban sprawl is a multifaceted concept that centers upon the expansion of auto-oriented, low-density development. Although disagreement exists over the definition of urban sprawl, for the purposes of this study the concept is generally defined as the uncontrolled expansion of low-density residential and commercial development outside of the borders of higher density urban centers.

production capacity of the agricultural resource base. Thus, productionist arguments have dominated the emerging discourse of farmland preservation due to perceptions that excessive farmland conversion jeopardizes agricultural production (Furuseth, 1985).

Various public perceptions and productionist arguments are key contributors to the debate surrounding the preservation of farmland. Planners, land economists, farmers, legislators, and others concerned with farmland preservation also contribute to this debate because they disagree about the impact of farmland conversion and urbanization of important farmland (Easley, 1982). It is therefore important to consider these issues when evaluating programs such as the Williamson Act. Taking these factors into account along with the level of public support will contribute to a greater understanding of the overall significance of the Williamson Act's preservation of farmland.

IMPORTANCE OF PUBLIC SUPPORT IN FARMLAND PRESERVATION

A principal factor that contributes to the success and effectiveness of farmland preservation policies and programs is public support. As aforementioned, farmland preservation may be accomplished using a wide variety of policy techniques and implemented by both public and private agencies. Yet, problems arise in preserving farmland if public support does not exist for particular programs. Halich (1999) and Johnston and Duke (2007) agree that while a particular technique may have the potential to effectively preserve farmland, it will ultimately be unsuccessful in doing so if it cannot also garner political support. They therefore suggest that it is crucial that policymakers and their constituents form relationships when developing farmland preservation programs.

Many policymakers are unable to determine if components of the programs are consistent with the broad range of preferences that generate public support for farmland preservation. In response, researchers and policymakers are in the process of formulating ways in which to combine preferences to form the most comprehensive farmland preservation programs (Roe, Irwin, Morrow-Jones, 2004). One strategy is collaboration. Legal methods such as command and control regulation are perceived as unsuitable for farmland preservation because they are not well suited to externalities caused by agricultural production. In order to coordinate among multiple decision makers conducting multiple activities across an area, collaboration offers the possibility of coordinated efforts for meaningful improvements in the preservation of farmland (Koontz, 2003). Thus, because it takes into greater account the preferences of the stakeholders,

collaboration provides a possible solution for creating successful agricultural land preservation policies and programs not only in California but in other states across the nation.

Another potential alternative for preserving farmland is by gauging public support through referendum, which is exemplified in the state of Pennsylvania (Kline & Wichelns, 1994). In November 1987, voters approved a statewide referendum for the sale of $100 million in bonds to finance the state's farmland preservation program. The program was eventually dedicated a funding source through the state's adoption of a special tax on cigarettes. This method of funding has allowed Pennsylvania to successfully preserve nearly 450,000 acres of farmland and more than 4,100 farms (Bureau of Farmland Preservation, 2013). Although this amount of acreage is tremendously smaller than the 16.5 million acres enrolled in the Williamson Act, it is essential to take into consideration that Pennsylvania only has approximately eight million acres of agricultural land and grosses six billion dollars in revenue from agricultural production (National Association of State Departments of Agriculture, 2012). In addition, the state also promotes preservation through its strict requirements of landowners. The preservation program stipulates that those who sell a conservation easement are required to have a soil and water conservation plan on the property at the time of sale and to update the plan every ten years (Daniels, 2004). Thus, the success of Pennsylvania may be largely due to the high prioritization of farmland preservation in public policy and that its residents have a high willingness to pay (Daniels, 2004). As policymakers and elected officials have eliminated the Williamson Act's funding, it appears that farmland preservation in California lacks a substantial amount of governmental support.

Ineffective Agricultural Land Preservation Policies and Programs in California

Although inefficient farmland conversion occurs throughout the United States, it is a particularly critical issue in California. As the state is not only the leading agricultural state in the U.S., generating $43.5 billion in 2011 from agricultural based revenue, California is also home to nine of the nation's top ten producing counties (California Department of Food and Agriculture, 2012). Its sheer size and production magnitude position inefficient farmland conversion as specifically detrimental to the state's economic and agricultural solvency. Concerns regarding the sustainability of agricultural production in California increase as annual population growth significantly increases and is expected to reach forty million by 2040 (Sanders, 1998). The growth largely contributes to the development of areas best suited for cropland as these areas are

also in high demand for commercial and residential development. Moreover, the consequences of inefficient development will ultimately result in decreases in food production and increases in food prices. Although Sanders (1998) and Kuminoff, Sokolow, and Sumner (2001) debate the severity of these consequences, they do agree that policymakers need to take initiative to inhibit future superfluous development.

Although California is the leading agricultural producer in the United States, the lack of literature and research concerning current programs and policies greatly impacts the development of farmland throughout the state. Some researchers suggest that data limitations inhibit a comprehensive evaluation of preservation mechanisms (Wo & Cho, 2007). The lack of data is further compounded by the plethora of programs and policies that already exist in California to preserve farmland. These include:

TABLE 1

PROGRAM/POLICY	TYPE
Agricultural Districts	Voluntary
Agricultural Protection Zoning	Mandated
Differential Assessment	Voluntary
Preferential Assessment	Voluntary
Purchase of Development Rights	Voluntary
Right-to-Farm	Voluntary
Transfer of Development Rights	Voluntary

Despite this variety of mechanisms, approximately 50,000 acres of California's prime farmland are lost to development every year.[9] A specific reason for their ineffectiveness, such as lack of public support, is unclear because the majority of literature that exists primarily explores various preservation policies and programs in other states and countries (Conklin & Bryant, 1974; Barrows & Prenguber, 1975; Furuseth, 1982; Nickerson & Lynch, 2001; Duke & Lynch, 2006; Daniels, 2007; Hellerstein & Nickerson, 2007). Cordes (2001) suggests that a possible reason for their ineffectiveness is that the majority of policies are voluntary, which allow property owners to ultimately decide whether to convert their land.

[9] Though, it is important to note that researchers acknowledge that some counties in California are more successful in preserving farmland than others.

Although political initiatives for farmland preservation initially originated from the desire to inhibit urban sprawl, farmland preservation has gradually become a public issue that is primarily concerned with the irreversibility and externalities of conversion as well as maintaining accessibility to agricultural lands. As a result, the growing public concern and support for farmland preservation programs and policies is critical to their existence as well as their success. Though agriculture in California continues to prosper despite the loss of an enormous amount of farmland, continued development jeopardizes farming and the economic viability of the state. Further, while California has many various voluntary and mandated preservation policies and programs, the state is still not able to effectively maintain and preserve farmland. Other states have successfully created and implemented effective policies. California, however, continues to falter in its attempts. This disparity necessitates a need to further study the Williamson Act as it is the largest preservation program in the state. Its responsibility for preserving more than 16 million acres of both prime and nonprime farmland is essential in mitigating farmland development. Yet, its ability to maintain the acreage enrolled has recently come under great scrutiny due to the state's difficult financial circumstances. In response to this, my research sought to examine the patterns in acreage of nonrenewal initiations and prime acreage of nonrenewal initiations, both of which are key indicators of the program's ability to preserve farmland. In addition, the research design, which utilized a historical analysis coupled with an exploration of statewide and regional relationships, took into account anecdotal information to supplement these findings. Through the evaluation of these findings, the objective of the research is to contribute to a greater understanding of the Williamson Act's ability to retain the amount of acreage enrolled and whether it is feasible to continue the program.

IV. RESEARCH DESIGN

The mixed method research design utilized a historical analysis in addition to a exploration of acreage enrollment statewide and regionally. The study did not solely rely upon statistical results to determine the effectiveness of the Williamson Act due to the political and financial climate affecting the implementation of the program. It therefore also necessitated an exploration of the externalities and issues affecting its implementation, which cannot be explained or experienced through statistical analysis. This design sought to explain and interpret

quantitative results by collecting and analyzing follow-up qualitative data. To do so, it supplemented the statistical results with findings from a document review of a variety of sources.

Historical Analysis

The historical analysis was essential to this study because it made sense of the past by analyzing data pertaining to the Williamson Act throughout the past twelve years. It permitted the researcher to consider a variety of sources of historical data. The design's flexibility allowed for a combination of methods to comprehensively examine the Williamson Act. Therefore, this research design conducted quantitative tests through time series regressions and built upon the results with data obtained from previous studies. The time series regressions analyzed the data extracted from the Williamson Act status reports over a twelve year period of time. Moreover, the findings of the historical analysis were used as a means for establishing a context or background against which a substantive contemporary study may be set.

Exploration of Statewide and Regional Enrollment

The exploration of enrollment data both statewide and of the six regions designated by the program (displayed below) was also critical to this study in that its findings further conveyed the Williamson Act's ability to preserve farmland. Unlike the historical analysis that illustrated the general performance of the Williamson Act over a period time, the exploration examined the relationships of enrollment data both statewide and regionally.

Table 2

Counties By Region					
North Coast & Mountain	**Sacramento Valley**	**Foothill & Sierra**	**San Joaquin**	**South Coast**	**Central Coast**
Humboldt	Butte	Amado	Fresno	Imperial	Alameda
Lake	Colusa	Calaveras	Kern	Los Angeles	Contra Costa
Lassen	Glenn	El Dorado	Kings	Orange	Monterey
Mendocino	Sacramento	Mariposa	Madera	Riverside	Napa
Modoc	Solano	Mono	Merced	San Bernardino	San Benito
Shasta	Sutter	Nevada	San Joaquin	San Diego	San Luis Obispo
Siskiyou	Tehama	Placer	Stanislaus	Santa Barbara	San Mateo
Trinity	Yolo	Plumas	Tulare	Ventura	Santa Clara
		Sierra			Santa Cruz
		Tuolumne			Sonoma

As statistical data could not solely determine the effectiveness of the Act due to the impact of ambiguous externalities, it was also important to use the findings from the review of recent studies and news articles to contextualize the exploration. Therefore, as with the historical analysis, the exploration also used qualitative data to supplement the quantitative results. The study advanced the statewide and regional exploration with a discussion of the current circumstances relevant to the Williamson Act. As a result, it contextualized the responses of counties within the different regions to the modifications of the Williamson Act.

V. HYPOTHESES

As mentioned, the forthcoming mixed methods research design utilized a combination of both hypotheses and qualitative questions in order to maintain the importance of both the qualitative and quantitative phases of the study. The hypotheses considered the various variables that contribute in determining the Williamson Act's ability to preserve farmland throughout California. The qualitative questions were broader but as equally important due to the fact that they were answered with contextual data. The anecdotal findings from the document review therefore also contributed a more comprehensive understanding of the Williamson Act's preservation of farmland. Outlined below are the hypotheses and qualitative questions that the study seeks to test and answer.

TABLE 3: HYPOTHESES		
Hypothesis One	H_0: Elimination of funding for the Williamson Act does not significantly change the acreage of nonrenewal initiations.	H_A: Elimination of funding for the Williamson Act significantly changes the acreage of nonrenewal initiations.
Hypothesis Two	H_0: Elimination of funding for the Williamson Act does not significantly change the acreage of prime nonrenewal initiations.	H_A: Elimination of funding for the Williamson Act significantly changes the acreage of prime nonrenewal initiations.
QUALITATIVE QUESTIONS		
Research Question One	How effectively has the Williamson Act preserved farmland throughout California in the past twelve years?	
Research Question Two	How has the current financial crisis affected the feasibility of further implementation of the Williamson Act?	

VI. VARIABLES

Three of the five variables were derived from the Government Code section 51207 mandated Williamson Act Task Reports, which, beginning in 1991, the Department of Conservation releases on a biennial basis. A biennial report includes information for each year separately rather than as a cumulative of the two years.[10] The variables from which information was taken from the Williamson Act Task Reports include the subventions comprising the Land Conservation Act option of the Williamson Act, the average acreage of nonrenewal initiations, and the prime average acreage of nonrenewal initiations. Information for the variable California agriculture revenue was taken from the annual revenue reports generated by the Legislative Analyst's Office and the California Department of Food and Agriculture's report of annual agricultural production statistics. Collectively, the study's dataset included the subventions comprising the Land Conservation Option of the Williamson Act, a time marker for the elimination of subventions, annual agriculture revenue, the average acreage of nonrenewal initiations, and the prime average acreage of nonrenewal initiations. The five variables were key components of this study and as such, their operationalization was necessary to conduct a comprehensive analysis to determine whether the program has maintained its acreage of farmland enrollment from 2000 to 2012. This section provides conceptual definitions and operationalizations as well as concisely outlines the variables that the study utilizes.

[10] The six regions used for the study are those designated in the Williamson Act Status Reports.

INDEPENDENT VARIABLES FOR THE WILLIAMSON ACT

Subventions

The Open Space Subvention Act (OSSA) was enacted on January 1, 1972 to provide for the partial replacement of local property tax revenue foregone as a result of participation in the Williamson Act and other enforceable open space restriction programs (Government Code §16140 et seq.) (DOC, 2012). Participating local governments have received annual payment on the basis of the number of eligible acres, quality (soil type and agricultural productivity), and for the location (proximity to a city) of land enrolled under eligible enforceable open space restrictions (DOC, 2012). The subventions were measured monetarily, in dollars, as either the total amount allocated statewide or as the total allocated per region.

Subvention Elimination

The Williamson Act was amended in 2009 with elimination of the funding for subventions to the counties enrolled. As it stands, it is currently up to the discretion of the counties to implement the program. The study measured the effect of the policy amendment in the form of a time marker prior to (2000 to 2009) and following its implementation (2009 to 2011) statewide and on a regional basis.

DEPENDENT VARIABLE

Nonrenewal Initiations of Acreage

The preferred method of contract termination is through the initiation of nonrenewal on a contract by either the landowner or local government (DOC, 2012). Upon initiation, the Land Conservation Act (the main component of the Williamson Act) contract sunsets over a nine-year period with the property taxes gradually rising to the full unrestricted rate at the end of the nonrenewal period. This variable includes reported acreage of nonrenewal initiations for only one subprogram of the Williamson Act, the Land Conservation Act. Nonrenewals are often filed with the anticipation of converting farmland to other uses (DOC, 2012). As such, nonrenewal initiations are key indicators of farmland conversions in particular locations. This variable was measured by the average aggregate amount of acreage statewide and in each region that is initiated for release from contract each year.

Prime Acreage Nonrenewal Initiations

The Williamson Act determines the quality of land based on economic and production criteria. Agricultural potential refers to the actual or potential agricultural productivity of the land being restricted. Contracted land that meets the Williamson Act definition of prime agricultural land consists of high quality soils that have high agricultural production capacities (DOC, 2012). The Act designates all other enrolled land, which have lower quality soils that do not have the capacity to produce high agricultural yields, as nonprime. This variable was measured by the ratio of annual prime acreage of Williamson Act nonrenewal initiations, both for counties across the state and each region, against the total annual acreage of Williamson Act nonrenewal initiations. The purpose of this variable was to identify whether the independent variables influence the quality of land that is enrolled in the program.

CONTROL VARIABLE

Agriculture Revenue

In deciding whether to continue enrollment in the Williamson Act, the landowner or county may rely upon agriculture revenue of the state as a potential determinate. As the nonrenewal expiration process spans nine years, it is unlikely that the landowner or county will rely upon one year of revenue data to make the decision to continue or rescind their contract. Therefore, it was necessary to lag the data by two years, beginning in 1998 and ending in 2010. This variable was measured by the ratio of annual agricultural revenue against total state revenue.

TABLE 4

VARIABLE OUTLINE		
	Measurement	**Operationalization**
Independent Variables		
	Subventions	The monetary amount (dollars) allocated as a statewide total. The monetary amount (dollars) allocated per region.
	Subvention Elimination	Time marker prior to the elimination of the funding for the subventions (2000-2009) and following its implementation from (2009-2012).
Control Variable		
	Agriculture Revenue (Ag Revenue)	Ratio of annual agriculture revenue against the total state revenue from 1998-2010.
Dependent Variable		
	Average Acreage of Nonrenewal Initiations	Average aggregate amount of Williamson Act acreage in each region and statewide that was initiated for nonrenewal each year from 2000-2012.
	Prime Average Acreage of Nonrenewal Initiations	Ratio of average annual prime acreage of Williamson Act nonrenewal initiations, both for counties across the state and each region, against the *total average* annual acreage of Williamson Act nonrenewal initiations from 2000-2012.

VII. RELIABILITY & VALIDITY

In regards to the reliability of the study, both the independent and dependent variables are straightforward measures of the concepts they seek to operationalize and define. This study's variables were reliable in that that they were based on detailed averages of the enrollment statistics provided by the Williamson Act Status Reports, and annual revenue statistics reported by Legislative Analyst's Office and California Department of Food and Agriculture. Specifically, by narrowing the study to examine the past twelve years, the Williamson Act Status

Reports were more cohesive in the information provided. The California State Department of Conservation is the primary authority for the Williamson Act, and is responsible for collecting and recording the data for the counties enrolled in biennial reports. The reports of the past twelve years were thorough as the information is recorded on both a state and county basis. However as this is a mixed methods study, it also utilized qualitative information gathered through a document review. The majority of the supplemental anecdotal information was taken from reports of the field's respected scholars and newspaper articles.

Moreover, in assessing the validity of the study, it is important to note that only three years of data exists post subvention elimination. This affected the study's validity in terms of its evaluation of the impacts of the elimination on the Williamson's Act ability to preserve farmland. Underlying this issue is the fact that both counties and farmland owners are still in the process in deciding how to respond to the elimination. To improve the validity of this study, the researcher took into account the current financial and political pressures when determining the Williamson Act's ability to preserve farmland from inefficient conversion. Additionally, the researcher discussed the primary responses of both the counties and farmland owners to the funding elimination. By utilizing both a historical analysis and an exploration of statewide and regional enrollment data, the results of this study can be generalized to future Williamson Act studies aimed at maintaining farmland preservation as a public priority.

VIII. DATA COLLECTION

This study utilized secondary data and did not have any interaction with human subjects during or following the analysis of information.

HISTORICAL ANALYSES

The statistical farmland data used for the historical analysis was taken from the biennial Williamson Act Program Status Report Microsoft® Excel spreadsheets provided by the California State Department of Conservation. Statistical data provided by the department's spreadsheets was uploaded into IBM SPSS to illustrate preservation patterns over a particular timeline for the historical analysis. A time series regression was employed to analyze the counties enrolled in the program since 2000 both statewide and on a regional basis.[11] The time

[11] The reports from 2000 forward have the county level data needed for the research. Prior to this, the DOC did not either issue reports for certain years or the data reported is on the state level rather than the county level.

series regression was essential in conveying relationships between variables and illustrating the patterns in the acreage enrolled by county. The study also supplemented the findings with information drawn from the document review of recent scholarly studies and periodicals. The information gathered into anecdotal evidence was used to further support and explain findings. Moreover, it served as a basis to contextualize the contemporary debate surrounding the effectiveness of the Williamson Act.

Exploration of Statewide and Regional Enrollment

Following the historical analysis, the exploration of statewide and regional enrollment used the statistical data generated by the previous time series regression to compare the Williamson Act on a regional basis. Utilizing this particular test allowed the study to make thorough examinations so as to gather insight into which region relied heavily upon the subventions provided by the Williamson Act to preserve farmland. Additionally, the study supplemented the exploration with information drawn from periodicals that highlight the counties' various responses to the subvention elimination.

IX. ANALYSIS

PURPOSE OF THE AVERAGE

Because counties vary widely in their Williamson Act average (see Figures 1 & 2), the data used in these analyses are the statewide and regional mean acreage and subvention totals per year. The purpose of using means (averages), instead of the overall totals per year, is to account for the variation in acreage for each county to better approximate the total amount of Williamson Act acreage in the state. Using means can better minimize error in that they provide a broader view of aggregate state-level changes in Williamson Act acreage. As a result, using the means was the most appropriate measure to reduce error for the study.

FIGURE 1

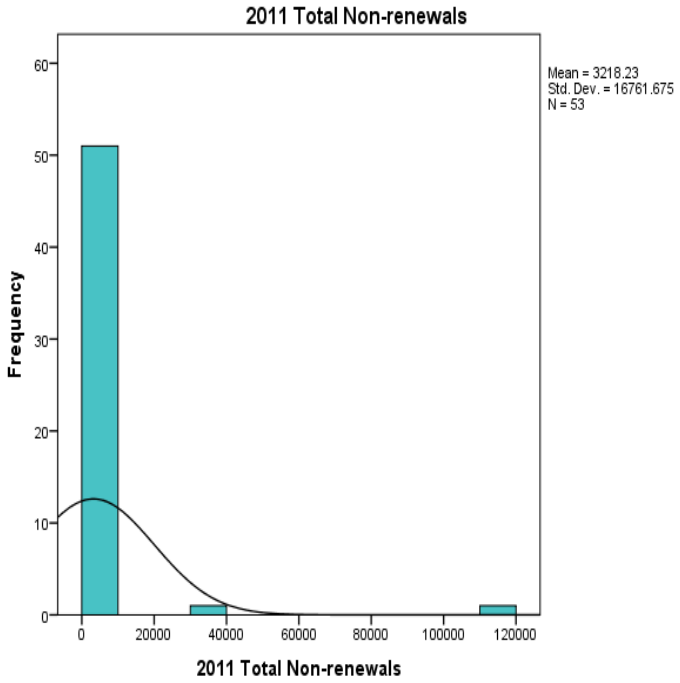
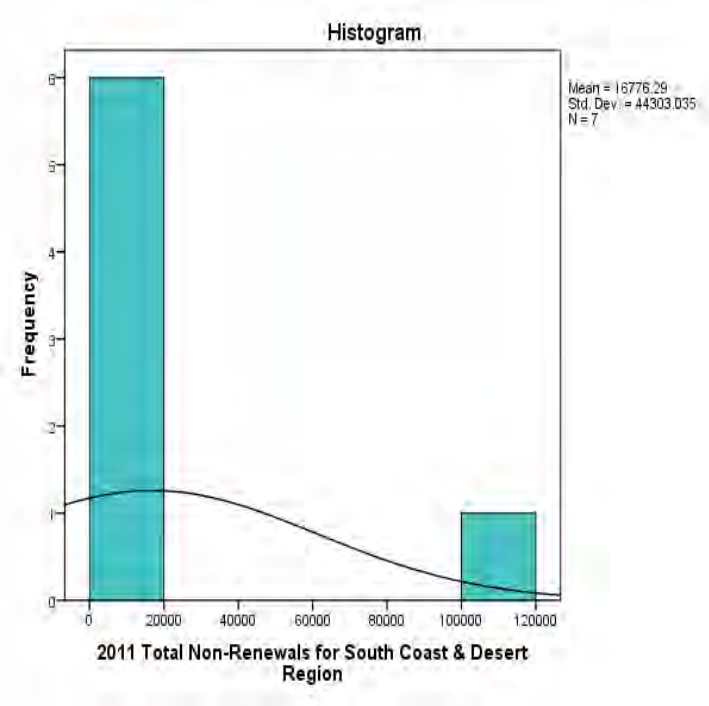


FIGURE 2



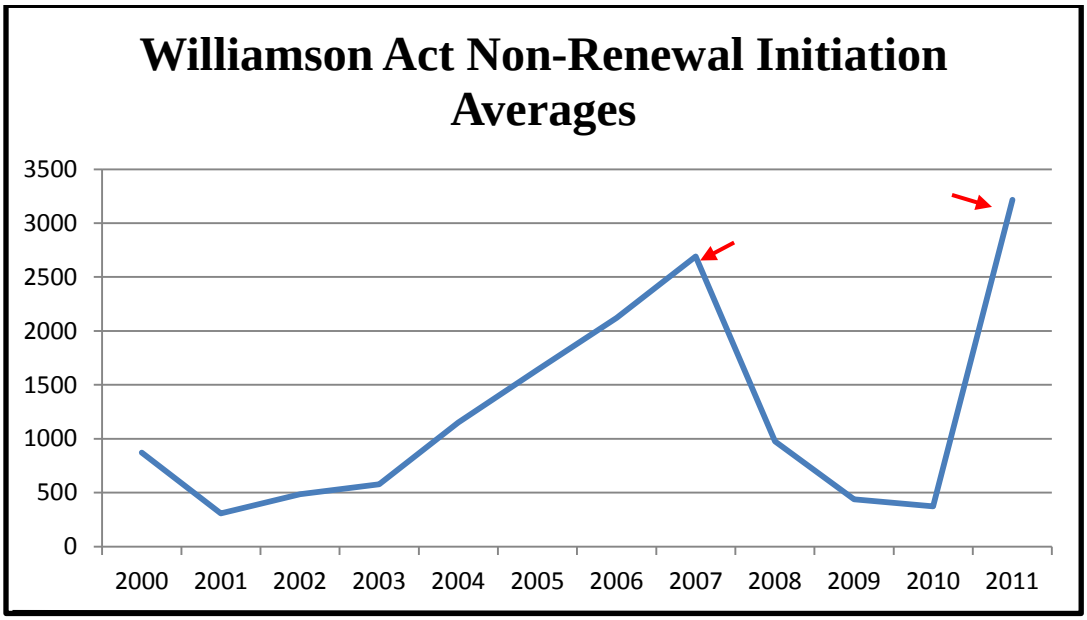
HYPOTHESIS ONE:

H_A: Elimination of funding for the Williamson Act significantly changes the acreage of nonrenewal initiations.

STATEWIDE AVERAGE ACREAGE OF NONRENEWAL INITIATIONS

As nonrenewals are often filed with the anticipation of converting farmland to other uses, they are key indicators for gauging the Williamson Act's ability to preserve farmland. Figure 3 showcases the trend of the average acreage for statewide nonrenewal initiations. For the 2000 to 2012 time frame of the study, the acreage of nonrenewal initiations for counties throughout the state first peaked at an average of approximately 2,700 acres. When taking Figure 3 into account, it appears that some factor caused the counties' average amount of acreage of nonrenewal initiations to peak in 2007 and subsequently decrease. Another larger peak of approximately 3,200 average acres of statewide nonrenewal initiations occurred in 2011. As data does not yet exist for the 2012 to 2013 fiscal year, it is inconclusive to whether the average acreage of annual nonrenewal initiations increased or decreased. Moreover, by solely relying upon the figure, it is unclear as to what caused the increases of nonrenewal initiations in 2008 and 2011.

FIGURE 3

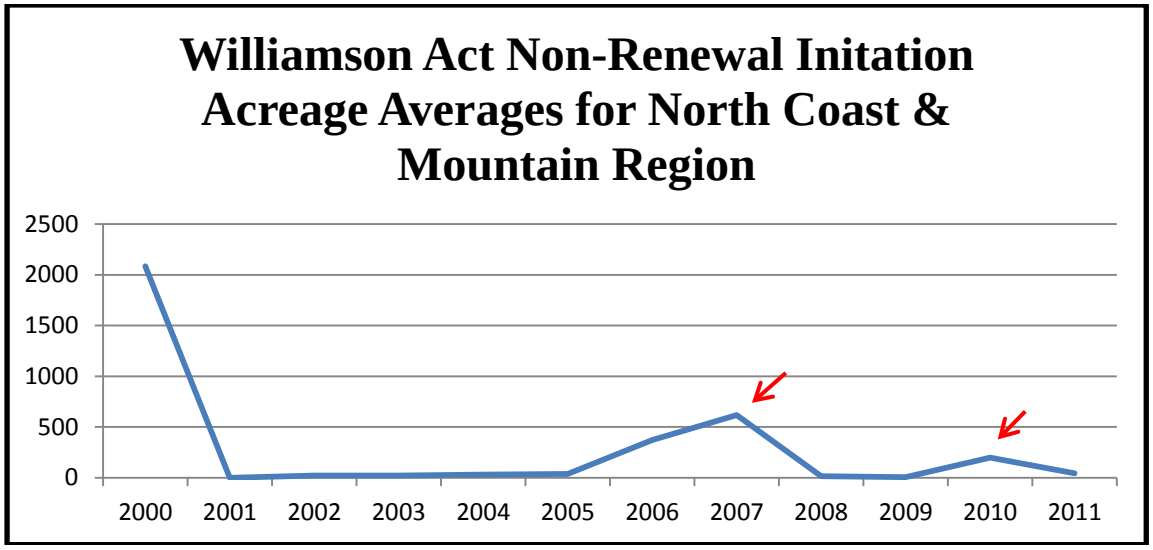


County Nonrenewal Initiation Acreage, 2000-2012.

NORTH COAST & MOUNTAIN REGION AVERAGE ACREAGE OF NONRENEWAL INITIATIONS

Figure 4 showcases the trend of the average acreage for the North Coast & Mountain Region's nonrenewal initiations. In 2007, the average acreage of nonrenewal initiations for counties throughout the region peaked at approximately 600 acres and subsequently decreased. Another smaller peak occurred in 2010 with approximately 250 acres of nonrenewal initiations, which also lasted temporarily. The region's average acreage amount of nonrenewal initiations decreased to almost zero by 2012. Although not nearly as high as the average acreage of statewide nonrenewal initiations, both the counties statewide and the North Coast and Mountain Region had increases in the average amount of nonrenewal initiations in 2008. However, the causes of the peaks are inconclusive when solely relying upon the figure for further information.

FIGURE 4

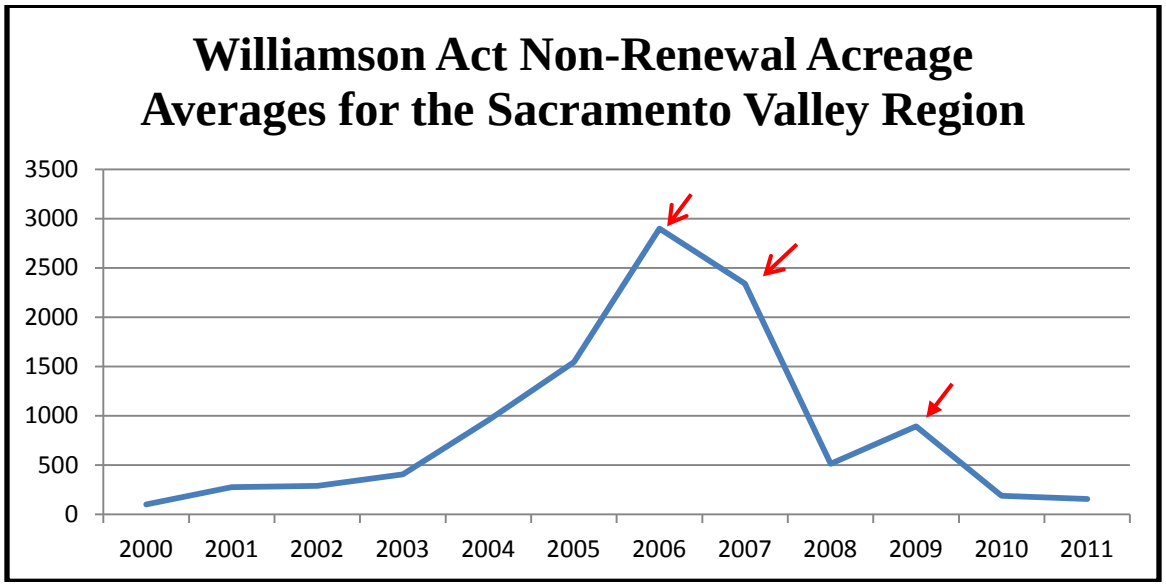


Average Nonrenewal Initiation Acreage of the North Coast & Mountain Region, 2000-2012

SACRAMENTO VALLEY REGION AVERAGE ACREAGE OF NONRENEWAL INITIATIONS

Figure 5 exhibits the trend of the average acreage of nonrenewal initiations for the Sacramento Valley Region. The average acreage of nonrenewal initiations for counties throughout the region first peaked at approximately 3,000 acres in 2006. Although the average acreage of nonrenewal initiations immediately decreased, a second smaller peak occurred in 2007 with nearly 2,500 average acres of nonrenewal initiations. Interestingly, in 2007, peaks in the average acreage of nonrenewal initiations also occurred in counties statewide and the North Coast and Mountain Region. In addition, another even smaller peak occurred in 2009 with an average of approximately 1,000 acres of nonrenewal initiations. The average acreage of nonrenewal initiations immediately started to decline, almost reaching zero in 2012. Another smaller peak occurred in 2009 with approximately 250 acres of nonrenewal initiations, which also lasted temporarily. Yet, the causes of these peaks are unknown when examining the figure.

FIGURE 5

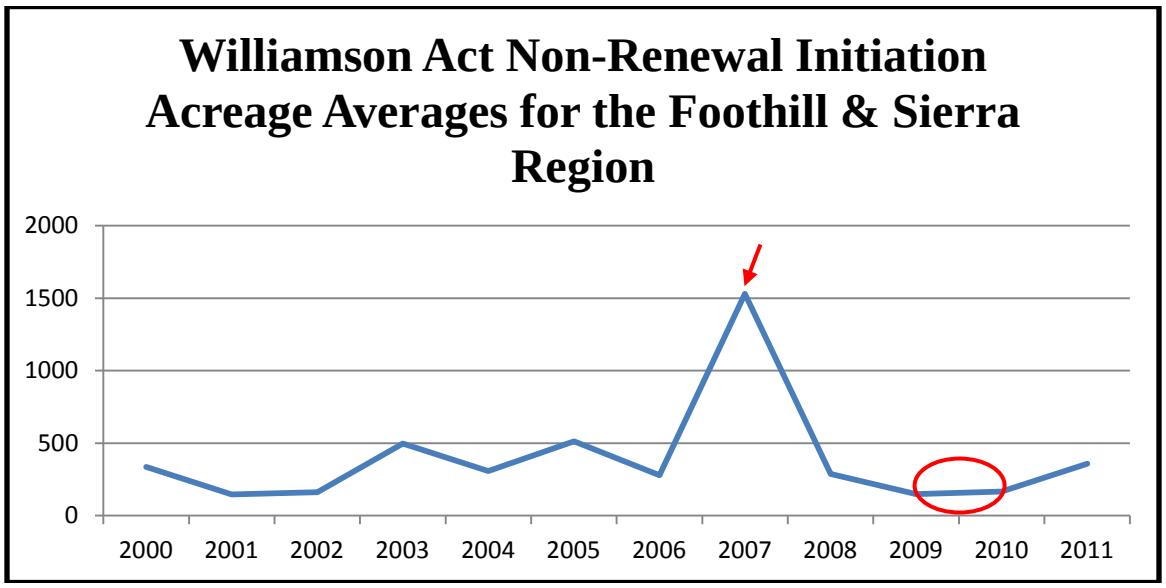


Sacramento Valley Region Average Nonrenewal Initiation Acreage, 2000-2012

FOOTHILL & SIERRA REGION AVERAGE ACREAGE OF NONRENEWAL INITIATIONS

Figure 6 showcases the trend of the average acreage of nonrenewal initiations for the Foothill and Sierra Region. The average acreage of nonrenewal initiations for counties throughout the region first peaked at approximately 1,500 acres in 2007. Similarly, in 2007, peaks in the average acreage of nonrenewal initiations also occurred in counties statewide, the North Coast and Mountain Region, and the Sacramento Valley Region. The average acreage of the region's nonrenewal initiations immediately decreased, nearly plateauing around 250 acres from 2009 to 2010, and began to increase and peak by 2012. As data does not yet exist for the 2012 to 2013 fiscal year, it is inconclusive as to whether the average acreage of annual nonrenewal initiations increased or decreased. Moreover, by solely relying upon the figure, it is unclear what caused the increases of nonrenewal initiations in 2007 and 2011.

FIGURE 6

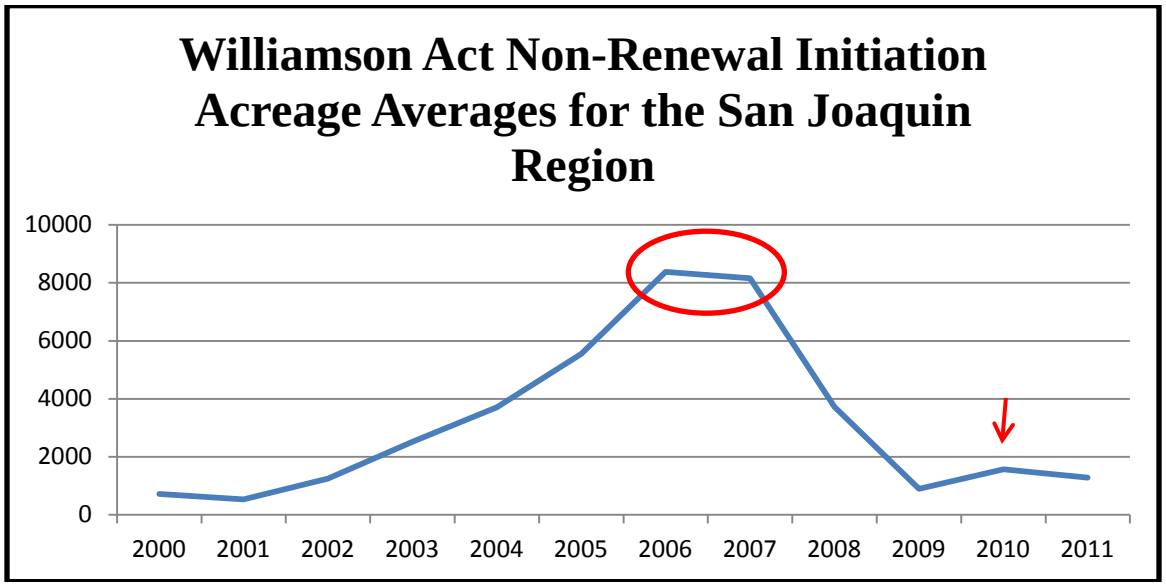


Foothill & Sierra Region Average Nonrenewal Initiation Acreage, 2000-2012

SAN JOAQUIN VALLEY REGION AVERAGE ACREAGE OF NONRENEWAL INITIATIONS

Figure 7 displays the trend in the average acreage of nonrenewal initiations for the San Joaquin Valley Region. The average acreage of nonrenewal initiations for counties throughout the region peaked and plateaued around approximately 8,000 acres from 2006 to 2007. This peak is similar to those that also occurred in counties statewide, the North Coast and Mountain Region, the Sacramento Valley Region, and the Foothill and Sierra Region during the same time frame. The regions' average acreage of nonrenewal initiations subsequently decreased, with a small peak of nearly 2,000 average acres in 2010. Yet, the average acreage of nonrenewal initiations slowly began to decline by the end of 2011. It is unclear as to whether the average acreage of nonrenewal initiations increased or declined because the data for 2012 is not yet unavailable.

FIGURE 7

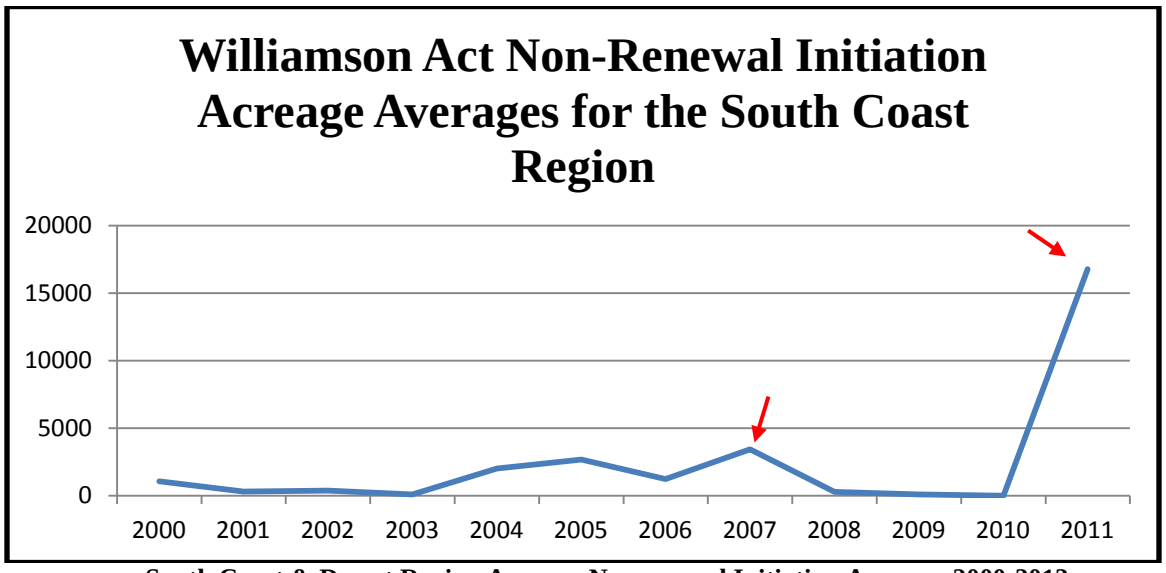


San Joaquin Valley Region Average Nonrenewal Initiation Acreage, 2000-2012

SOUTH COAST & DESERT REGION AVERAGE ACREAGE OF NONRENEWAL INITIATIONS

Figure 8 displays the trend in the average acreage of nonrenewal initiations for the South Coast and Desert Region. The average acreage of nonrenewal initiations for counties throughout the region slightly peaked at approximately 4,000 acres in 2007. In 2007, a peak in nonrenewal initiations also occurred in counties statewide, the North Coast and Mountain Region, the Sacramento Valley Region, the Foothill and Sierra Region, and the San Joaquin Valley Region. The region's average acreage of nonrenewal initiations subsequently decreased, with a second higher peak of more than 16,000 average acres following in 2011. As data does not yet exist for the 2012 to 2013 fiscal year, it is inconclusive as to whether the average acreage of annual nonrenewal initiations increased or decreased. Moreover, by solely relying upon the figure, it is unclear as to what caused the increases of nonrenewal initiations in 2007 and 2011.

FIGURE 8

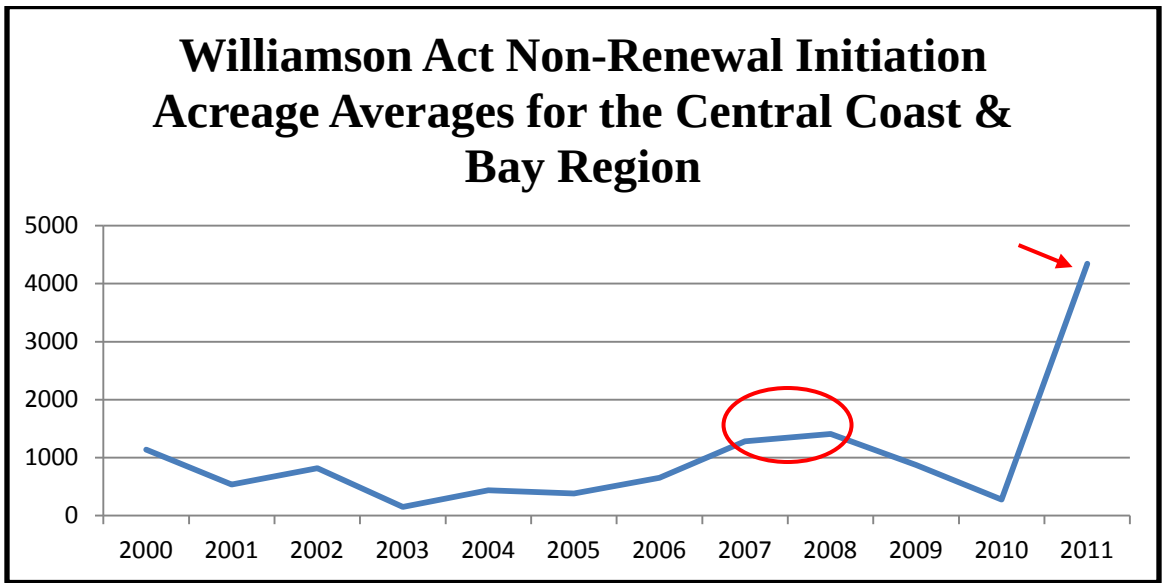


South Coast & Desert Region Average Nonrenewal Initiation Acreage, 2000-2012

CENTRAL COAST & BAY REGION AVERAGE ACREAGE OF NONRENEWAL INITIATIONS

Figure 9 displays the trend in the average acreage of nonrenewal initiations for the Central Coast and Bay Region. The average acreage of nonrenewal initiations for counties throughout the region slightly peaked and nearly plateaued at approximately 2,200 acres from 2007 to 2008. Similarly, the trend of the average acreage of nonrenewal initiations peaking in 2007 also occurred in counties statewide and all other regions. The regions' average acreage of nonrenewal initiations subsequently decreased after 2008, and peaked once again in 2011 with more than 4,200 acres. As data does not yet exist for the 2012 to 2013 fiscal year, it is inconclusive to whether the average acreage of annual nonrenewal initiations increased or decreased. Moreover by solely relying upon the figure, the causes of the increases in nonrenewal initiation average acreage in 2007 and 2011 are inconclusive.

FIGURE 9



Central Coast & Bay Region Average Nonrenewal Initiation Acreage, 2000-2012

LEVELS OF SIGNIFICANCE FOR STATEWIDE AND REGIONAL AVERAGE ACREAGE OF NONRENEWAL INITIATIONS

Time series regressions were performed for counties statewide as well as the six Williamson Act regions designated by the California State Department of Conservation. With the exception of the San Joaquin Valley Region, the regression outputs indicate that when controlling for agriculture revenue, the independent variables are statistically insignificant. Moreover, it is

important to note that that agriculture revenue for the North Coast and Mountain Region is almost statistically significant (p=.055). Therefore, excluding the San Joaquin Valley Region, the study fails to reject the null hypothesis for statewide and regional average acreage of nonrenewal initiations.

TABLE 5
Levels of Significance for Average Acreage Nonrenewal Initiations

	Statewide	North Coast & Mountain Region	Sacramento Valley Region	Foothill & Sierra Region	San Joaquin Valley Region	South Coast & Desert Region	Central Coast & Bay Region
Agriculture Revenue	p= .959 NO	p=.055 **ALMOST**	p=.411 NO	p=.959 NO	p=.876 NO	p=.982 NO	p= .930 NO
Subventions for All Counties	p= .142 NO	p=.127 NO	p=.476 NO	p=.142 NO	p=.007** YES	p=.926 NO	p= .417 NO
Elimination of Funding	p=.130 NO	p=.163 NO	p=.495 NO	p=.130 NO	p=.006** YES	p=.755 NO	p= .374 NO

REPORTED SIGNIFICANCE OF THE SAN JOAQUIN VALLEY REGION

The time series regression performed for nonrenewal initiation data for the San Joaquin Valley Region confirms that autocorrelation does not exist (the Durbin Watson is 1.653). The adjusted R-square indicates that 59.7% of the region's nonrenewal initiation acreage is explained by the independent variables. The F- test, F(3)= 6.422, p=.016* leads to the rejection of the null hypothesis due to its statistical significance.[12] Table 3 indicates that agriculture revenue is statistically insignificant. However, it indicates that a rise in the subventions caused a decrease in amount of acreage initiated for nonrenewal. Technically, for every $1 increase in subvention, (.22) fewer acres were initiated for nonrenewal. Substantively, for every $4 of Williamson Act subventions, farmers elected to keep approximately 1 acre enrolled. Moreover, when the subvention elimination occurred in 2009, the amount of average acreage of nonrenewal initiations decreased by 56,991. In the San Joaquin Valley, moving from the lowest average

[12] Statistical significance at the .05 level is indicated with one asterisk (*), where significance at the .01 level is indicated with two asterisks (**)

subvention of $2,354,666 to the highest average subvention of $ 2,674,632 saves 70,399.52 acres.[13]

TABLE 6
Coefficients

Variable	B	Std. Error	T	Significance
AGRICULTURE REVENUE	2812.401	17447.337	.036	.876
SUBVENTIONS FOR SAN JOAQUIN VALLEY REGION	-.22	.006	-3.554	.007**
SUBVENTION ELIMINATION	-56991.456	15520.258	-3.672	.006**
CONSTANT	57124.329	13998.129	4.081	.004

a. Dependent Variable: Average Acreage of Williamson Act Nonrenewal Initiations for San Joaquin Valley Region

HYPOTHESIS TWO:

H_A: ELIMINATION OF FUNDING FOR THE WILLIAMSON ACT SIGNIFICANTLY CHANGES THE ACREAGE OF PRIME NONRENEWAL INITIATIONS.

LEVELS OF SIGNIFICANCE FOR STATEWIDE AND REGIONAL PRIME AVERAGE ACREAGE OF NONRENEWAL INITIATIONS

As prime farmland is important due to its high production capacity, it is critical to examine the trend in its nonrenewal initiations. Time series regressions were performed for statewide and regional prime nonrenewal average acreage initiation data. The regressions outputs indicate that when controlling for agriculture revenue, the independent variables were statistically insignificant for all regions and counties statewide. As a result, the study fails to reject the null hypothesis for prime average acreage of nonrenewal initiations.

[13] The amount of acreage (70,399.52) is determined by multiplying the b-value of the subventions (-.22) by $2,674,632 and $2,354,666, and then finding the differences between the products (-588,419.04; -518,026.52).

TABLE 7
Levels of Significance for Prime Average Acreage Nonrenewal Initiations

	Statewide	North Coast & Mountain Region	Sacramento Valley Region	Foothill & Sierra Region	San Joaquin Valley Region	South Coast & Desert Region	Central Coast & Bay Region
Agriculture Revenue	p= .897 NO	p=.742 NO	p=.398 NO	p=.856 NO	p=.816 NO	p=.676 NO	p= .318 NO
Subventions for All Counties	p= .557 NO	p=.536 NO	p=.961 NO	p=.120 NO	p=.969 NO	p=.499 NO	p= .122 NO
Elimination of Subventions	p=.562 NO	p=.504 NO	p=.965 NO	p=.187 NO	p=.816 NO	p=.755 NO	p= .103 NO

X. LIMITATIONS

Although this study produced meaningful results on the effects of the subvention elimination on the total and prime average acreage nonrenewal initiations, the findings lacked a high level of robustness due to limitations in the time frame and utilization of the averages.

Time Frame

This study was limited in that the elimination of the subventions for the Williamson Act occurred in 2009. With only three years of the data existing after the subvention elimination, this limitation hinders the ability to create any significant insight into the actual effects of the subvention elimination on enrollment. While it appears that in some counties farmers have decided to retain their farmland in the Williamson Act, many counties throughout the state are in the process of determining whether they should continue to implement the program. More time must elapse in order to comprehensively identify the effects of the subvention elimination on enrollment and the overall participation of the counties in the program.

Generalizability

Because the Williamson Act is unique to California, its generalizability outside of the state is greatly limited. As the issue of farmland preservation intensifies, it is requisite that scholars conduct further research investigating the impacts of farmland conversion. This will be essential in identifying programs and policies that effectively retain and protect farmland from inefficient conversion. Moreover, it is critical that researchers develop a greater understanding of the conditions under which individual programs and policies operate. Although the Williamson

Act is not generalizable to the United States as a whole, certain components of its structure may be adapted to supplement future farmland preservation programs and policies in California.

Averages

Although the study created averages for the subventions and acreage to minimize error, doing so affected the outcomes in specific regions. Despite the average's ability to account for the variation in acreage of each county, it has difficulty correlating the large increases or decreases in subventions or acreage. Therefore, if counties respond to subvention eliminations by rescinding their contracts, the average may not be able to account for the large adjustments in enrollment.

XI. DISCUSSION

In examining the previous results, the study failed to reject both null hypotheses for counties statewide as well as all regions with the exception of one. As farmland preservation in California has become a pressing issue, advocates of the Williamson Act worried that the elimination of the subventions would greatly affect enrollment in the program. Despite conventional wisdom and proponents' fears of the program's purpose, the results of the study indicate that the elimination of subventions for the Williamson Act did not significantly impact acreage that went into nonrenewal. In fact, in the San Joaquin Valley Region, the elimination of subventions actually decreased the number of acre initiated for nonrenewal, meaning that more farmland was actually retained in the program. Interestingly, although home to California's top grossing agricultural counties, the region has also had the second highest farmland conversion rate in the state. Therefore, when the subvention elimination occurred, farmland owners of the San Joaquin Valley Region actually decided to maintain enrollment in the program. This came in spite of the fact that the counties will no longer receive a high compensation for implementation of the program. As a result, it is possible to infer that the decision to maintain acreage enrollment actually supports the counties' valuation of the program as being more than just monetary.

Further, the quality of land going into nonrenewal did not change with the elimination of subventions at both statewide and regional levels. As it did not affect the number of prime nonrenewal initiations did not increase or decrease, land owners are maintaining enrollment of prime quality farmland in the Williamson Act. This provides critical insight because the production capacity of prime farmland is a valuable source of agricultural revenue for California.

If the prime nonrenewal initiations had actually increased, it would have indicated the development of California's most productive farmland.

However, it is important to note that the graphs of the total average acreage of nonrenewal initiations did depict increases in nonrenewal initiations. The most significant increases occurred in 2011 in not only counties statewide, but also in the South Coast and Central Coast Regions. As time series regressions were specifically conducted for the subvention elimination's impact on the average acreage of nonrenewal initiations, it remains inconclusive as to the primary cause of the rise in nonrenewal initiations. One possible assumption is that utilizing the average may have impacted the results of the regressions and is confirmed with the document review of Imperial County's response to the subvention elimination. Despite this, the data of the time series regression upheld the trend in data exhibited on the line graphs.

CONTEXTUALIZING RESULTS & COUNTY RESPONSES

In an effort to understand why there are no overall significant impacts, it is critical to recognize that counties have responded differently to their participation in the Williamson Act. The Supervisors of Imperial County in 2010, prior to the creation of AB 1265, decided not to renew its contract with the Williamson Act.[14] This decision came in spite of opposition from state and county Farm Bureaus as well as the farmers in the area. The County Supervisors' justification for this decision was that Governor Schwarzenegger's decision to reduce subventions to $1,000 resulted in the county losing nearly $500,000 in funding for lost property taxes (Varin, 2010). They contended that it was no longer financially feasible to participate in the program. They based this argument on the fact that exiting the Williamson Act would therefore allow the Imperial County to recover $5 million over a period of nine years. In contrast, Yolo County has implemented the Act for the past forty years resulting in the preservation of approximately 400,000 acres of farmland throughout area (Ternus-Bellamy, 2012). With widespread support throughout the county from farmers, the Supervisors decided in October 2012 to continue its implementation of AB 1265 from last year. This decision is expected to

[14] Essentially, AB 1265 reinstates the relevant Williamson Act and allows eligible counties to re-capture 10 percent of the property tax benefits provided to the owners of Williamson Act lands (DOC, 2012). For counties implementing AB 1265, the contract length for the Land Conservation Act option of the Williamson decreases to nine years.

result in a recoup of almost $500,000 for the county, approximately half of what Yolo would collect from farmers if agreements were nonexistent (Ternus-Bellamy, 2012).

Until recently, Fresno County Supervisors were considering implementing 10 percent property reduction of AB 1265. In 2011, the approximately 14,000 parcels that benefitted from the Williamson Act, more than in any other California county, were collectively worth $23 million dollars (Alexander, 2012b). Despite the large enrollment, the underlying concern was that the county, which is under financial duress, could not recoup its property tax losses that were once reimbursed by the program's subventions. Although it would somewhat alleviate the fiscal circumstances of the county, the 10 percent reduction in tax breaks for farmers is not nearly equivalent to the subventions provided prior to 2009. Yet, those in support of the reduction argued that they could no longer afford to offer the entire tax benefit because it comes at the expense of public services. Prior to the decision, the Williamson Act's legitimacy was called into question by many of the Fresno County Supervisors when it was revealed that almost half of the county's total tax break goes to 250 large landholders, many of whom receive annual reductions of up to $100,000 (Alexander, 2012b). In addition, not all of those receiving a Williamson Act tax benefit are serving agricultural interests. Despite this, the Supervisors voted against implementing the 10 percent tax break reduction due to public support. As a result, it is therefore projected that county will lose close to $25 million to the Williamson Act in the 2012 fiscal year.

Although the program is not financially feasible for all counties, the examples aforementioned demonstrate that there is a large amount of public support reinforcing the implementation of the program. Many other counties with large enrollments, including Tulare County, are on the brink of or immersed in dire financial circumstances. Yet, for the most part, they uphold the option for farmland preservation with the Williamson Act. In doing so, the continued implementation of the program conveys the counties' understanding of the importance of preserving agriculture and protecting it from development.

CONTEXTUALIZING PARTICIPANT CONCERNS

Recently, a study performed by researchers at University of California, Davis revealed that if the cuts continue and the Act is eliminated, owners of ranchland will sell 20 percent of their total acres (Wetzel, Lacher, Swezey, Moffitt, & Manning, 2012). Rangeland is a critical resource in California as it is home to important ecosystems and habitats, and facilitates the

delivery of fresh water throughout the state. However as California ranching is also a vulnerable low-profit industry, the tax relief provided by the Williamson Act ultimately makes the difference between a small profit and a loss. The rate of rangeland development in California exceeds the conversion rate for croplands and if the Act is eliminated, the conversion rate will increase as more ranchers are forced to sell their land. Findings show that ranchers predicted that 76 percent of land sold would likely be developed commercially for nonagricultural, non-open space uses such as residential development (Wetzel, Lacher, Swezey, Moffitt, & Manning, 2012). This pressure not only jeopardizes the viability of the ranching industry but also the environmental entities dependent upon the existence of rangeland. Moreover, although it is not financially feasible for most counties to continue implementation, many ranchers largely depend upon the property tax reductions to continue ranching and sustaining their livelihoods. With their continued participation, ranchers and farmers ensure the preservation of farmland. Therefore, it is critical to continue evaluating the program in order to ensure that it is fulfilling its objective of preserving farmland.

XII. FURTHER RESEARCH

Supplementary Interviews

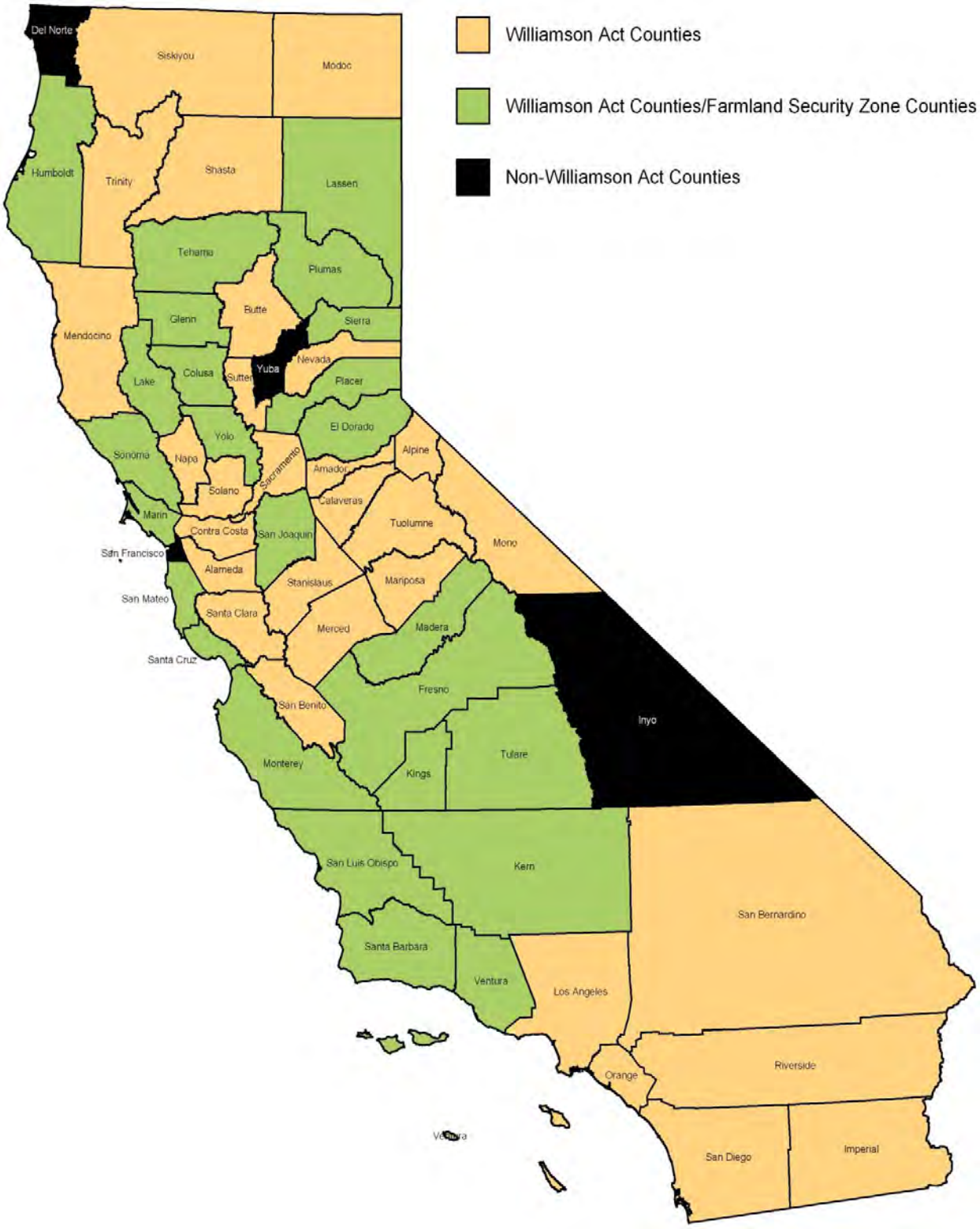
As the study only utilized qualitative data from periodicals and recent studies, future research would greatly benefit from conducting interviews to evaluate the program's ability to preserve farmland. Through the researcher's encounters and dialogues with farmers and ranchers, these stakeholders have provided valuable insights into how the subvention elimination has affected their perception of the Williamson Act. Moreover, farm and rangeland owners provide great detail and contribute to a greater understanding of the underlying importance of the program in preserving rangeland and farmland. As the program also entails the participation of counties and cities, conducting interviews with city and county officials would greatly benefit future research. In doing so, future research will be able to better ascertain a government level perception of farmland preservation and the Williamson Act. Consequently, as there has also been some discussion pertaining to the complete elimination of the program, interviewing participants would be beneficial in developing a comprehensive understanding of the impacts of the total dissolution of the Act.

XIII. CONCLUSION

With nearly half of California's agricultural land enrolled in the program, it is questionable that policymakers constantly target the Williamson Act for budget cuts. It appears that the underlying reason for this is the controversy pertaining to the program's ability to preserve agricultural and open space acreage. Its proponents believe the program is a successful case of "converging public and private interests, achieving long-term land conservation while helping the economic bottom line of farmers and ranchers" (Sokolow, 2010, p. 120). However, its critics question the ability of the Act to inhibit further growth on the fringes of cities as it has done little to limit the rate and volume of farmland conversions in the path of city expansion. With the complete elimination of subventions in 2009, the opportunity arose to either confirm or deny both arguments. The impact of the subvention of the eliminations was insignificant, with one county even electing to save farmland from nonrenewal. Although the elimination of subventions occurred during a period of financial disorder, the majority of counties, largely due to public support of the program, have already decided to continue participation in the Williamson Act. The significance of these decisions lies in the fact that they not only continue the preservation of nearly 16 million acres of farmland and rangeland, but also ensure the opportunity for future enrollment. Furthermore, it advances the fact that the value of the program is intrinsic rather than monetary. Thus, the Williamson Act continues to preserve a valuable resource that is fundamental to overall wellbeing of California.

Appendix A

County Participation



Appendix B

Regions of the Williamson Act

Resources

Alexander, K. (2012a, September 16). Fresno County supervisors retain Williamson Act tax break. *The Fresno Bee.* Retrieved from http://www.fresnobee.com/2012/09/18/2997349/fresno-county supervisors-vote.html

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