

Memorandum

To: Mr. Timothy W. Boyer
Interim Executive Director

Date: September 25, 2003

From: 
David J. Gau, Deputy Director
Property and Special Taxes Department

Subject: *Assessors' Handbook Section 521, Assessment of Agricultural and Open-Space Properties (October 15, 2003 Administrative Consent Agenda)*

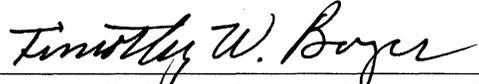
I am requesting that Assessors' Handbook Section 521, *Assessment of Agricultural and Open-Space Properties*, be approved for publication. The current version of the handbook was adopted by the Board in September 1997. Recent statutory amendments necessitate revisions to the handbook.

Staff worked with interested parties, including representatives from the California Assessors' Association and members of the agricultural and conservation community, during the update of this handbook. The revised language represents concurrence among the interested parties who participated in this project.

Please place this item on the Board's October 15, 2003 Administrative Consent Calendar for approval.

DJG:sk
Attachment

cc: Ms. Deborah Pellegrini

Approved: 
Timothy W. Boyer, Interim Executive Director

BOARD APPROVED
at the _____ Board Meeting

Deborah Pellegrini, Chief
Board Proceedings

ASSESSORS' HANDBOOK
SECTION 521

ASSESSMENT OF AGRICULTURAL
AND
OPEN-SPACE PROPERTIES

~~SEPTEMBER 1997~~ OCTOBER 2003

CALIFORNIA STATE BOARD OF EQUALIZATION

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FOREWORD

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Agriculture is California's leading industry, and the promulgation of uniform appraisal practices for agricultural property is a major concern to the assessment community. Assessors' Handbook Section 521, *The Appraisal of Agricultural Properties*, was first published in 1969 to assist assessors in their valuation of these properties.

In 1965 the Legislature enacted the California Land Conservation Act (CLCA) in an effort to preserve agricultural lands for the production of food and fiber and to discourage noncontiguous urban development. The enactment of the CLCA and related legislation created the initial need for Assessors' Handbook Section 521A, *The Valuation of Open-Space Property*. AH 521A was first published in 1975 and updated in 1983 and 1990.

Numerous legislative changes made to open-space statutes and to other statutes affecting agricultural properties necessitated an update of both ~~manual~~handbooks. In 1997, the two handbooks were completely revised and the two ~~This manual combines the~~ subject matters of the former AH 521 and AH 521A were combined into one handbook so that it would~~it~~ result in a more inclusive publication for appraisers.

Part I of this handbook contains the appraisal practices, procedures, and statutes for the assessment of agricultural properties. The content is sufficiently comprehensive to help beginning, journey-level, and advanced appraisers in the appraisal of rural properties. Its goal is to assist county assessors in their valuation efforts and to advance assessment uniformity for this major property use-type.

Part II contains the principles of the special assessment procedures accorded enforceably restricted properties under section 8, article XIII of the California Constitution. It is intended as an aid for journey-level appraisers who are fully cognizant of the appraisal procedures for the assessment of agricultural property as outlined in Part I. The goal of Part II is to promote uniformity in the administration of the open-space appraisal program by county assessors.

This section of the Assessors' Handbook was drafted by staff of the Assessment Policy, Planning, and Standards Division of the Property and Special Taxes Department in conjunction with the staff of the Property Taxes Division of the Legal Department. Board staff met with industry representatives and staff from county assessors' offices to solicit input for this handbook. The Board originally approved this handbook section in September 1997 and this update in
_____.

David J. Gau
Deputy Director
Property and Special Taxes Department
Date

PART I

**ASSESSMENT OF
AGRICULTURAL
PROPERTY**

Table Of Contents

CHAPTER 1: INTRODUCTION.....	1
CHAPTER 2: NATURE OF AGRICULTURAL PROPERTY	3
PHYSICAL FACTORS	3
<i>Soil</i>	3
<i>Climate</i>	8
<i>Water</i>	9
ECONOMIC AND SOCIAL FACTORS	14
<i>Marketing Conditions</i>	14
<i>Use Patterns</i>	15
<i>Cultural, Operational, and Management Factors</i>	15
<i>Land Use Restrictions</i>	16
SUMMARY	19
CHAPTER 3: APPRAISAL PROCESS.....	20
DEFINITION	20
STEPS IN THE APPRAISAL PROCESS	20
<i>Definition of the Problem</i>	20
<i>Preliminary Analysis and Data Collection</i>	21
<i>Highest and Best Use Analysis</i>	21
<i>Land Value Estimate</i>	21
<i>Application of the Approaches to Value</i>	21
<i>Reconciliation of Value Indicators and the Final Value Estimate</i>	22
<i>Reporting the Final Value Estimate</i>	22
PROPERTY USE	22
UNIT TO BE APPRAISED	24
TOOLS AND DATA SOURCES.....	26
<i>U. S. Geological Topographic Survey Maps</i>	26
<i>Aerial Photographs</i>	26
<i>Cropping Information</i>	27
VALUE APPROACHES	27
<i>Cost Approach</i>	28
<i>Comparative Sales Approach</i>	30
<i>Income Approach</i>	38
ESTIMATION OF POTENTIAL GROSS INCOME	43
<i>Cash or Rental Lease Agreements</i>	43
<i>Share Crop Agreements</i>	43
<i>Owner-Operator Income</i>	43
<i>Annual Income Estimates</i>	44
ESTIMATION OF EXPENSES	44
<i>Cultural and Growing Costs</i>	45
<i>Management Fees</i>	45
<i>Water And Irrigation Costs</i>	46

Maintenance 46
Labor Expenses..... 46
Insurance Expense 46
Property Taxes..... 46
Miscellaneous Expenses..... 46
CAPITALIZATION RATES 47
CAPITALIZATION TECHNIQUES 49
 Direct Capitalization..... 49
 Yield Capitalization..... 50
RESIDUAL TECHNIQUES 50
 Building Residual Technique..... 51
 Land Residual Technique 51
 Property Reversion..... 51
INCOME MULTIPLIERS 52
RECONCILIATION AND THE FINAL VALUE ESTIMATE..... 52
CHAPTER 4: VALUATION OF NONLIVING IMPROVEMENTS..... 54
RESIDENCES AND RURAL HOMESITES 54
FARM BUILDINGS AND MISCELLANEOUS IMPROVEMENTS 55
IRRIGATION IMPROVEMENTS 58
 Classification..... 58
 Valuation Problems..... 58
CHAPTER 5: APPRAISAL OF CROP LAND 62
GENERAL 62
VALUE OF CROP LAND 62
 Crop Rotation 62
 Income Capitalization..... 66
 Comparative Sales Approach..... 66
 Crops Classified as Land 67
 Crop Allotments/Production Contracts..... 67
CHAPTER 6: APPRAISAL OF GRAZING LAND 68
GENERAL 68
DATA FOR THE APPRAISAL OF GRAZING LANDS 68
ANIMAL UNIT SYSTEM..... 69
 Grazing Land Terminology 69
 Animal Unit Equivalents 70
GRAZING OPERATIONS..... 72
 Cow-Calf Operations 72
 Stocker/Feeder Operations..... 74
AU METHOD AND THE COMPARATIVE SALES APPROACH..... 75
INCOME APPROACH 78
PARCEL VALUE ALLOCATION..... 82
SUMMARY 82

CHAPTER 7: APPRAISAL OF ORCHARDS AND VINEYARDS	84
GENERAL	84
FACTORS TO CONSIDER IN ORCHARD AND VINEYARD APPRAISAL	85
<i>Development Time and Productive Life</i>	85
<i>Rootstock and Buds</i>	86
<i>Climate</i>	87
<i>Soil</i>	87
<i>Irrigation</i>	88
<i>Frost Protection</i>	88
<i>Production and Marketing</i>	88
<i>Competition</i>	89
<i>Tree and Vine Spacing</i>	89
APPROACHES TO VALUE	90
<i>Comparative Sales Approach</i>	90
<i>Cost Approach</i>	92
<i>Income Approach</i>	92
<i>Reconciliation of the Approaches</i>	99
CHAPTER 8: APPRAISAL OF DAIRY PROPERTY.....	100
APPROACHES TO VALUE	101
<i>Cost Approach</i>	101
<i>Income Approach</i>	101
<i>Comparative Sales Approach</i>	102
CHAPTER 9: AGRICULTURAL LAND IN TRANSITION.....	104
GENERAL	104
VALUATION.....	105
<i>Comparative Sales Approach</i>	105
<i>Cost Approach</i>	106
<i>Income Approach</i>	106
SUMMARY	107

CHAPTER 1: INTRODUCTION

California has a land area of 100.2 million acres and is the third largest state in the United States. ~~As of 2000, it contains an~~ it is estimated that ~~29~~ 27.8 million acres are devoted to agricultural production. Agriculture is by far the largest single industry in California.

California is the number one dairy and farming state in the nation in terms of the variety of livestock raised, crops grown, and the total dollar volume realized, even though the crops are produced on only 2 to 3 percent of the nation's total farming acreage. Beef is one of the state's leading agricultural exports. ~~Over 250~~ Some 350 different commodities are grown in the state, and California ranks first in the nation in the production of 41 of these commodities. California produces over 95 percent of the table and wine grapes, raisins, almonds, artichokes, dates, figs, nectarines, olives, pomegranates, prunes, plums, kiwis, pistachios, apricots, avocados, garlic, persimmons, and walnuts grown in this country. In addition to these commodities, California is a major producer of cotton, rice, tomatoes, potatoes, cattle, lettuce, strawberries, asparagus, peaches, melons, onions, milk, nursery products, oranges, chickens, and hay.

California has eight of the top ten agricultural counties in the nation. Several counties experienced sharp declines in agricultural production from 1974 to ~~1997~~ 2000 because of urban encroachment, thereby reducing California's total agricultural acreage from 35 to ~~29~~ 27.8 million acres.¹

The quality of an appraiser's work depends upon the knowledge and application of the forces that influence agricultural real estate values at the neighborhood, community, regional, and national levels. These forces have been classified into four categories: social forces, economic conditions, governmental controls, and environmental conditions. The interaction of these forces influences the value of real estate in the marketplace.

Population characteristics and demand for land are the driving influences behind social forces. An analysis of the demographic composition of a region's population establishes the need and demand for real estate services, or in this case, land for future expansion. Examples of these social forces are general population trends and changes in the standard of living.

Economic forces are based on the fundamental relationship between present and anticipated supply and demand and the economic ability of a region's population to satisfy ~~their~~ its wants, needs, and demands. Examples of economic forces include significant changes in a community's employment base, availability of financing, changes in employment and income patterns, and development levels.

Governmental forces are broadly construed to include political decisions made at all levels of government and decisions made by the judicial system. The supply and demand of land for real estate, and its value, are heavily influenced by governmental actions and controls. Examples of

¹ *California Agricultural Resource Directory*, California Department of Food and Agriculture, Sacramento, ~~1996~~2001.

1 governmental influences include zoning and building codes, development restrictions,
2 environmental regulations, and restrictions on cultural practices.

3 Environmental forces are the most noticeable because they can be seen and include climatic
4 conditions, quality and condition of soils, water availability, and transportation systems which
5 provide adequate ingress and egress to specific locations.

6 An understanding and appreciation of the forces influencing value is essential to the appraisal of
7 agricultural real estate. The four forces were discussed separately, but they work together in their
8 affect on values and an analysis of the forces establishes an appropriate background for the study
9 of agricultural appraisal.

10 This ~~manual~~handbook has three purposes: (1) to define the nature of agricultural real estate; (2) to
11 discuss and explain the factors that influence the value of agricultural real estate; and (3) to
12 explain and describe techniques that may be utilized to measure the market value of agricultural
13 real estate. The appraisal of agricultural properties requires specialized knowledge regarding the
14 fundamentals of real property valuation, as well as specific knowledge concerning agricultural
15 practices. The appraiser must be familiar with the fundamentals of real property valuation as
16 explained in Assessors' Handbook Section 501, *Basic Appraisal*, before undertaking a study of
17 this ~~manual~~handbook or attempting an appraisal of agricultural property.

18 Many of the concepts and techniques contained in Part I of this ~~manual~~handbook are equally
19 applicable to the valuation of open-space property. That subject is covered in detail in Part II.

CHAPTER 2: NATURE OF AGRICULTURAL PROPERTY

Land is basic and is the principal source of mineral, animal, and vegetable substances that sustain life. The productivity of agricultural land is measured by its capacity to generate food, fiber, livestock, timber, minerals, and other commodities essential for human existence. The value of agricultural property is a measure of the total effect of all physical, social, economic and governmental forces upon the land and improvements. In the following sections, the attributes of agricultural property are discussed and the systems ordinarily used to classify such characteristics are described.

PHYSICAL FACTORS

SOIL

Soil is the basic component of value in agricultural properties used for the production of agricultural commodities because it is the medium of productive capability. Soil composition in any one place varies according to its origin, location, and the effects of climate and organic matter. Soil has both changeable and unchangeable attributes that collectively form the physical and chemical traits that differentiate the various types.

Significant soil characteristics include texture, structure, consistency, thickness, and soil horizons, or layers. The various characteristics, together with soil and locational attributes such as depth of soil, depth to bedrock or root hindering stratum, water holding capacity, and drainage give an indication of the soil's potential productivity.

Soil layers, often referred to as soil horizons, contain specific characteristics created by the soil forming process. The soil layers run parallel to the surface but fluctuate in depth, thickness, and have irregular boundaries. The top six feet of soil is the most important layer and contains a profile broken down into three different layers known as the surface soil, subsoil, and substratum. The surface soil is generally 6 to 12 inches deep, the subsoil is approximately 4 to 5 feet deep, and the substratum is approximately 6 to 12 inches deep. The surface soil and subsoil comprise the solum, the portion of the soil where soil formation is most dynamic and the majority of the soil's plants and animals reside.

Depth refers to the distance downward from the soil surface to the first plant hindering material within the soil. Normally, soil is considered "deep" if there is no plant hindering material down to a depth of six feet. Depth is a crucial factor and dictates crop types for a particular locale. Shallow rooted crops (grains, legumes, rice) can be raised on fairly shallow soil while deep-rooted crops (trees, alfalfa, safflower) require a deep, well-drained soil. In some instances, restrictive layers that hinder root development may be ripped or shattered to transform a shallow soil into one suitable for deep-rooted crops. The layers that hinder plant growth consist of three fundamental materials: clay, lime cemented hardpans, and iron cemented hardpans. Each of these

1 layers has distinct physical and chemical characteristics and require different treatments to become
2 more productive soils.

3 **Soil profile** refers to a vertical cross section of a soil showing its composition to a depth of at
4 least six feet. Soil profiles exhibit two distinct characteristics: texture (described below) and
5 development. Development is the soil-aging process that occurs as different horizons (layers)
6 within the soil profile acquire distinct characteristics. Development can proceed beyond the soil
7 surface as finer particulents and soluble materials are leached from the upper layers to accumulate
8 at lower levels within the root zone. Soil scientists describe soils in terms of the characteristics of
9 the respective horizons.

10 The nature of a soil's profile is one of the criteria used for identification and classification and can
11 be readily applied by appraisers to establish comparability between properties.

12 The two **soil types** (primary and secondary) are created by two completely different methods.
13 Primary soils, found in hills and mountains, are created in place through the decomposition and
14 disintegration of rocks through physical and chemical action. Primary soils tend to have lower
15 productivity, although some crops do quite well on this type of soil. Secondary soils are created
16 more dynamically. Gravity, temperature fluctuations, and erosion created by the actions of wind
17 and water continually reduce immense masses of rock into soil particles that are washed out into
18 valleys and plains. The action of moving water is capable of transporting tremendous amounts of
19 material, and as water velocity decreases, the larger particles drop out first and then successively
20 smaller particles are deposited. At lower elevations, water runoff from mountains spreads out and
21 deposits the finest particles of clay and silt.

22 Particle size largely determines the water-holding capability of any soil. Fine textured soils (clays,
23 silts, and loams) are capable of storing larger quantities of water than coarse textured soils
24 (loamy sands and sands). This factor dictates the type of crops best suited to a specific area, the
25 type of irrigation system, and frequency of irrigation.

26 **Soil structure** refers to the arrangement of primary soil particles into aggregates or clusters.
27 These small aggregates (known as peds) fall into four categories that describe the shape of the
28 cluster: platy, prismatic, block-like, and spheroidal. The form or shape of the aggregate plays a
29 significant role in soil productivity. Generally, spheroid-shaped soils have more space between
30 aggregates, have greater water permeability, and are more productive. Soil structure varies from
31 layer to layer and heavily influences the favorability of root growth.

32 **Soil consistency** pertains to the strength and nature of the characteristics that allow soil particles
33 to hold together. Terms commonly used to describe soil consistency (from very loose to
34 extremely hard) include: loose, soft, friable, firm, plastic, sticky, hard, and cemented.

35 **Stable Characteristics**

36 The **texture** of a soil refers to the relative proportions of three basic particle sizes: sand, silt, and
37 clay. Texture is determined by the weight of the three particles after all coarse fragments have

1 been removed. Soil textural class names describe the various kinds of soil textures based on
2 combinations of the three particles. There are twelve primary texture classes: clay, silty clay,
3 sandy clay, silty clay loam, clay loam, sandy clay loam, silt, silt loam, sand, sandy loam, loamy
4 sand, and loam. A soil's texture is its most stable quality over an extended period, although
5 natural and man-made forces can alter this characteristic.

6 **Soil slope** refers to its deviation from the horizontal; this is expressed as a percent grade rather
7 than in degree of angle. Thus, a slope designated as 20 percent means that for every 100 feet
8 horizontally the soil surface rises 20 feet. Not all soil slopes rise evenly, and those that rise
9 erratically are referred to as undulating.

10 **Soil color** can be a good indicator of productivity because it tends to indicate the presence of
11 beneficial organic matter. Commonly, the darker the soil color the more productive the soil.
12 However, care must be exercised because in several cases the soil color is merely a reflection of
13 the underlying soil material.

14 **Less Stable Characteristics**

15 Drainage pertains to both the visible drainage patterns on land and the speed at which water
16 moves through soils. Drainage is affected by the texture of the soil, its profile, and the soil slope.
17 Practically all drainage problems occur in areas of relatively flat terrain where dense subsoils
18 (known as hardpan) restrict water movement. High water tables can produce drainage problems,
19 even in areas of porous soils, and tiling, drainage ditches, or both are employed to improve poor
20 drainage conditions.

21 **Alkali** refers to the three excessive levels of salt concentrations found in soils: saline, saline alkali,
22 and alkaline which may be further delineated into white and black alkali. The critical feature of
23 these designations is the presence and concentration of sodium. If a soil has moderate
24 concentrations of common salt (NaCl), it can be vastly improved by leaching the salt, through the
25 application of large amounts of water, to a level below the root line. If the soil contains moderate
26 to heavy concentrations of salt, classified as saline alkali, soil amendments such as sulfur or
27 gypsum are required and should be applied along with large amounts of water. If the soil contains
28 heavy concentrations of salt, classified as alkaline, extensive quantities of both soil amendments
29 and water may be required to improve the alkaline condition.

30 An appraiser's interest in the reclamation of alkaline soils is based on determination of the cost to
31 cure the condition and whether anticipated future returns exceed the required investment.

32 **Erosion** is the washing or blowing away of soil caused by the action of wind or water. Removal
33 of a uniform thickness of soil, from erosion, for a particular locale results in a condition known as
34 sheet erosion. When extensive crevices or washes are formed, the condition is known as gully
35 erosion. An extraordinary illustration of long term gully erosion was caused by the Colorado
36 River and resulted in the Grand Canyon. Soil is most vulnerable to erosion when it is bare,
37 sloping, or disturbed by cultivation. Water or wind moving across the soil picks up and carries
38 soil particles. When ground cover is present, it protects the particles and tends to hold them in

1 place. Soil erosion may be repaired, but the cost to cure the condition may be extremely
2 expensive and long-term benefits may not outweigh the necessary investment.

3 **Soil fertility** relies on the quantity of organic matter and plant nutrients naturally available in a
4 form that plants can readily absorb. The elements most often deficient in soils include nitrogen,
5 phosphorus, and potassium. Numerous additional elements are required in lesser quantities for
6 optimal growth, and soils are occasionally found to be deficient in calcium, boron, copper, zinc,
7 and manganese. Fertility can be improved through soil amendments or through management
8 practices that restore and retain sufficient levels of nitrogen, phosphorus, potash, and other plant
9 nutrients.

10 The **pH factor** of soils plays a dominant role in crop selection. Soil with a high alkaline content
11 severely restricts the types of plantable crops and can make land a virtual sterile wasteland.
12 Similarly, land with a high acid level tends to secure and hold onto soil nutrients, making them
13 unavailable for plant use. Many plants are sensitive to either of the two conditions, and plants
14 cannot be successfully grown unless the soil is modified through soil amendments. Fortunately, in
15 practically all cases, soil alkalinity and acidity can be corrected through the application of sulfur
16 and lime, respectively.

17 **Micro-relief** refers to the topography of the soil in miniature and includes these descriptive terms:
18 smooth, hogwallows (humps and depressions), dunes, hummocks (small mounds), and channels.
19 Land-leveling operations can generally eliminate any undesirable micro-relief features.

20 **Macro-relief** refers to the general slope of the land and includes these descriptive terms: level,
21 gently undulating, gently sloping, undulating, moderately sloping, rolling, strongly sloping, hilly,
22 steep, and very steep.

23 **Classification and Rating**

24 Soil classification consists of grouping soils in an orderly arrangement. There are many ways to
25 do this, and several systems of classification are used. The simplest systems are those based upon
26 individual soil characteristics such as reaction, color, or parent material. More comprehensive
27 classifications include additional soil properties.

28 **Soil Surveys**

29 The vast majority of land in California has been officially surveyed (inventoried and classified) by
30 the University of California (UC) and the United States Department of Agriculture, National
31 Resources Soil-Conservation Service (NRSCS). Aerial maps were taken, based on township
32 and range, and soil types indicated on the respective maps.

33 The soil classification system used by UC and the NRSCS is called the series system. Each
34 individual soil series is assigned a name, often based upon an association with the area where the
35 series was first identified. To date, over 500 individual soil series have been recognized in
36 California. Among the more common soils are the Hesperia, Columbia, Panoche, Yolo, Dinuba,

1 and Stockton series. The soil type refers to the texture of the soil (for example, Hesperia Sandy
2 Loam), and there are currently over 2,000 identified series type soil combinations in California.

3 The soil~~s~~soil classifications contain variations, or phases, and phase identifications are based on
4 the less stable components of soil: alkali, drainage, nutrient level, erosion, and micro-relief.
5 Where unfavorable conditions exist, due to one or more of these factors, the soil is identified as
6 such; for example, Dinuba Sand, moderate alkali, poorly drained phase.

7 **Classification By Natural Land Class**

8 The Natural Land Classification identifies soils by physiographic groups based on general
9 topographic characteristics, or slope position. Five topographic groups are identified in this
10 system:

- 11 • Class A: alluvial fan, or flood plain land, generally situated in valleys. Commonly, the land
12 is nearly level to gently sloping, although some alluvial soils may be found with more
13 pronounced slopes.
- 14 • Class B: basin land usually situated at the lowest valley floor levels. The land is typically
15 flat, or nearly so.
- 16 • Lower terrace land: usually associated with the perimeter of valley floors and, typically,
17 gently sloping.
- 18 • Higher terrace land: gently sloping to rolling and occupies higher terrain around the
19 perimeter of valley floors.
- 20 • Upland: land which is mountainous in character and consists of steep slopes.

21 **Storie Soil Rating Index**

22 The Storie Soil Rating Index system is based on the physical characteristics of soil and its
23 potential productivity. Additional factors including water, climate, and economic conditions do
24 not affect the ratings. Any specific rating should be considered as a soil rating only, not as an
25 indicator of land value.

26 The system is named for its inventor, Professor R. Earl Storie. The system consists of rating each
27 of the soil's components: characteristics of the soil profile, texture of the surface, the primary
28 slope of the land, and other less permanent modifiable factors, then combining the individual
29 ratings for an overall evaluation of the soil.

30 It should be noted in this rating system that any one factor can be controlling. For instance, a
31 moderately affected alkali condition may lower an otherwise good soil to as low as 30 percent
32 overall. If the particular condition was modified or cured after the survey was made, the indicated
33 rating would be erroneous. In another instance, a combination of minor deficiencies of a soil will
34 compound and result in a rather low overall rating.

35 Whenever soil ratings are examined and used as an aid in estimating the productive capabilities of
36 land, an appraiser must look beyond just the overall rating and examine all relevant factors for any

1 specific parcel of property. Soil surveys contain additional relevant information, including crop
2 adaptability, which can be of considerable importance to an appraiser.

3 **Natural Resources Soil Conservation Service Land Capability**

4 The Land Capability Classification from the Natural Resources Soil Conservation Service
5 (NRSCS) rates land according to its inherent productive capability and the cultural practices
6 required to maintain optimum production levels. The NRSCS established eight different land
7 capability classes with characteristics as follows:

- 8 • Class I soils have few restrictions on their adaptability and use.
- 9 • Class II soils have moderate restrictions that limit crop adaptability or that require moderate
10 conservation practices.
- 11 • Class III soils have severe restrictions that limit crop adaptability or that require stringent
12 conservation practices.
- 13 • Class IV soils have extremely severe restrictions that further limit crop adaptability or that
14 require stringent conservation practices.
- 15 • Class V through Class VIII soils have severe restrictions that make these soil types
16 generally unsuitable for cultivation. Restrictions may include extreme erosion, lack of
17 water, high water tables, inadequate drainage, severe alkalinity, shallow soils, climate, and
18 land forms that preclude their use for agricultural production.
- 19 • Classes II through VIII include four subclasses signifying particular kinds of soil restrictions
20 that include the following: (1) subclass "e" indicates that the primary restriction is the threat
21 from erosion; (2) subclass "w" indicates the primary restriction is due to a specific water
22 problem; (3) subclass "s" indicates the primary restriction is due to a specific soil problem;
23 and (4) subclass "c" indicates the primary restriction is due to climatic conditions.

24 The NRSCS land capability system is a subjective rating that takes into consideration not only the
25 physical factors of soil, but also considers the availability of water and climatic effects. The
26 system was initially designed for soil management and conservation practices; however, each land
27 capability description contains specific recommendations for farming practices.

28 **CLIMATE**

29 Climate, which includes the elements of temperature, wind, rainfall, and humidity, exerts a
30 tremendous influence on the productivity and, consequently, value of agricultural property.

31 Wide variations in mean temperature levels have a significant impact on the length of growing
32 seasons—those intervals between spring and killing frosts in the fall. Crops such as cotton require
33 an extended growing season to reach maturity. Climate, along with soils, is one of the crucial
34 factors in determining where any crop may be successfully grown.

35 Summer rainfall is notably absent in most parts of California, and many areas do not receive
36 sufficient rainfall during the winter and spring rainy seasons to sustain crop growth during the

1 summer months. Consequently, the San Joaquin and Sacramento valleys, as well as the desert
2 valleys of Imperial and Coachella, must rely on supplemental irrigation to satisfy crop
3 requirements.

4 Wind is like the proverbial two-edged sword and can be either beneficial or detrimental depending
5 on whether it has a cooling effect or a harmful effect which causes premature fruit drop.
6 Depending on the particular type of crop and time of year, humidity may also be either beneficial
7 or detrimental.

8 **WATER**

9 California has the world's most sophisticated water delivery system that includes a series of
10 reservoirs and waterways that deliver water to millions of acres of agricultural land each year.
11 Without this additional source of water to supplement natural rainfall, along with pumps and
12 wells, much of California's most productive agricultural land would become nearly worthless.

13 The important characteristics of water include quantity, quality, source of supply, and availability
14 when needed. These factors are likely to vary significantly from year to year throughout any
15 specific region. Water conditions are accorded such importance that many agricultural lenders
16 will decline otherwise qualified customers if a water source is suspect or unstable.

17 **Water Quality**

18 Rain provides the highest quality water for agricultural purposes. However, due to the
19 uncertainty of rainfall at any given time, additional sources of water are required for productive
20 agriculture. Irrigation water is generally of lesser quality due to the accumulation of soluble
21 minerals, fertilizers, pesticides, and other undesirable elements from runoff and other farming
22 operations for a particular area. Depending on the region, water quality from wells can range
23 from poor to excellent. Three classes of water quality are identified.

- 24 • Class 1 water is excellent to good and suitable for most plants under typical conditions.
- 25 • Class 2 water is good to injurious; it may be harmful to sensitive, nontolerant crops.
- 26 • Class 3 water is injurious to unsatisfactory, probably harmful to the majority of crops and
27 unsatisfactory for all crops but the most tolerant. If water falls into the class 3 category for
28 any reason (conductance, salt content, percentage of sodium, boron, lead content), it should
29 be considered unsuitable under nearly all conditions.

30 **Water Quantity**

31 The amount, availability, dependability, quality, and cost of a water supply determine the relative
32 benefits to be derived from irrigation and directly affect the value of irrigated property. These
33 factors depend on the source of water and the water rights that affect their usage.

34 Equally important as water quality is sufficient water quantity, when needed, to support growing
35 crops. Economic production levels can be achieved in some regions by utilizing annual
36 precipitation. However, for most areas in California economic levels of production can only be

1 obtained through the application of sufficient quantities of irrigation water at appropriate times.
2 There are some regions in California with productive soils where no crops are grown since there
3 is neither adequate precipitation nor available surface water, and pumped water is either too
4 expensive or contains undesirable elements.

5 **Water Sources and Rights**

6 A dependable source of good quality irrigation water is a crucial element in achieving an
7 economic level of crop production. Ideally, a property has access to sufficient class 1 water, as
8 needed, at a reasonable cost. Fortunately, the majority of California areas capable of productive
9 agriculture have irrigation water available from federal, state, public/private water projects, water
10 districts, or individual wells. The vast majority of surface water provided for agricultural use
11 emanates from Northern California, is carried south through a series of waterways, with the cost
12 in direct proportion to the distance traveled before use.

13 Surface irrigation water is generally stored and delivered to customers by public and private
14 irrigation entities through a network distribution of lateral ditches and canals. Typically, the
15 improvements required to divert the water from the laterals or canals into a farm's irrigation
16 system is owned by the water company or water district. From the point of diversion, the water
17 flows into either lined or unlined ditches, buried underground pipelines, or portable aboveground
18 pipelines.

19 When available, or permitted, a large percentage of farmlands supplement their surface water
20 supply with water pumped from individual wells located on or adjacent to the property. While
21 pumped water quality is generally class 1 and class 2, pumping is not economic in many regions of
22 California due to the cost of energy and/or restrictions on pumping levels. Because of increasing
23 demands on the available subsurface water supply caused by population growth and industry
24 expansion, water levels are expected to continue to recede and the cost to pump water is expected
25 to continue to escalate.

26 Water rights to streams, rivers, and tributaries constitute the right to a definite or conditional flow
27 of water at stated times and in specified quantities for irrigation purposes. A legal right to use
28 water is important to the value of any property and is a factor to be considered in association with
29 surface or pumped water. Three kinds of water rights exist: riparian, appropriative, and
30 prescriptive.

31 A **riparian** right (doctrine) is based on English common law, giving the owner of land bordering
32 on a lake, stream, or natural water source the right to use the water on the contiguous land. A
33 riparian right is created exclusively because the land is situated next to a natural water source, and
34 the right to the use of the surface water rests solely in the ownership of the land. A riparian right
35 is not created by water usage, nor lost through nonusage, but can be lost through condemnation,
36 changes in course of the water source, selling the land adjacent to the water source, and adverse
37 water usage by owners of adjacent lands. Riparian owners, regardless of the location of the water
38 source or date of acquisition, are equally entitled to reasonable beneficial use without significantly
39 diminishing the water quality or quantity. A riparian right is superior to nonprescriptive

1 appropriative rights. Although riparian rights are created because land and water is adjacent,
2 riparian rights can be transferred from an original property to another property.

3 An **appropriative** right is based on state ownership of the water and constitutes a legal right to
4 water flowing in public waterways, if taken for reasonable and beneficial uses in accordance with
5 specific local requirements.² An appropriative right entitles the user to a specific amount of water
6 and frequently to a specific point of diversion, time, place of use, and method of diversion. Older
7 water rights have priority over more recently acquired water rights (first in time is first in right),
8 and holders of older appropriative rights are entitled to a full quantity of water before any water is
9 given to more recent users. An appropriative right can be lost by nonuse, condemnation,
10 abandonment, or by prescription. An appropriative right is considered a real property right,
11 separable from the land, and can be transferred separately. When appropriative rights are
12 established, it is important to determine their dates of priority and the resultant effects on water
13 availability to each user for any one year.

14 A **prescriptive** right is obtained through the open and adverse diversion of water to which others
15 have prior rights. If the open diversion of water is continued without interruption for the
16 consecutive number of years established by state law, a prescriptive right is granted. A
17 prescriptive right may be lost in the same manner as acquired.³

18 **Irrigation Methods and Systems**

19 Ideally, the appropriate irrigation practice would be to provide the correct amount of water
20 required by crops at any particular growth stage, considering all climatic factors and
21 environmental constraints. However, irrigation systems lack optimal efficiency, and a portion of
22 water applied to the soil is lost through evaporation, drainage, runoff, and deep percolation.

23 A proper rate of water application is essential to successful irrigation, and three major factors
24 need to be considered:

- 25 • Water requirements of the crop
- 26 • Water availability
- 27 • Capability of the soil to retain moisture

28 An efficient irrigation system should have the capability to deliver the necessary water to meet
29 plant growing requirements and to compensate for the lost water volume.

30 Various irrigation methods are in general use throughout California. The following paragraphs
31 include a brief description of each type.

² Hutchins, W. A., *Irrigation Water Rights in California*, Circular 452 (Revised) California Agriculture Experiment Station Extension Service, University of California, Davis, 1967.

³ Hutchins, W. A., page 298 et seq.

1 **Wild Flooding**

2 Water is applied to land and allowed to flow without any earthwork to direct the flow or restrict
3 the water's path. This method is generally only used to irrigate pasture land in mountain areas.
4 Wild flooding requires a minimal initial investment and little land leveling or land preparation.
5 This method makes it difficult to regulate the water flow, can result in erosion, and substantial
6 amounts of water are lost through evaporation, runoff, and percolation. Water costs can make
7 this type of irrigation expensive.

8 **Border Flooding**

9 Small parallel ridges are formed approximately 30 to 50 feet apart and streams of water flow
10 slowly between the ridges, soaking into the ground as the water advances. This method is
11 suitable for fairly level strips of land between ridges and requires a uniform gradient. Border
12 flooding is particularly suitable for medium soils planted to grains, hay, and alfalfa. This method
13 makes efficient use of large quantities of water, but the advantages are often offset by the initial
14 cost of land preparation and water costs.

15 **Basin Flooding**

16 Square basins are formed by making borders at 90° angles, approximately 30 to 50 feet apart,
17 which are quickly flooded to an appropriate level to achieve deep water penetration. This method
18 is suitable for deep-rooted crops such as orchards and vineyards and for use on heavy or slowly
19 permeable soils. Basin flooding is adaptable to different needs based on the required shape,
20 height, and irrigation configuration. This method applies water quickly and uniformly, and
21 generally results in fairly low operating costs. These advantages may be offset by the initial cost
22 of land preparation and water costs.

23 **Furrow**

24 Water flows down uniformly spaced furrows, wetting a portion of the surface. This method is
25 suitable for the majority of soil types and is especially suited for row crops. Furrow irrigation is
26 adaptable to different soils and crops by varying the length, width, height, spacing, and size of the
27 furrows. This method generally results in less water evaporation, uniform watering, and reduced
28 operating costs; and the land can be cultivated immediately after irrigation. The advantages are
29 offset by the initial cost of land preparation and planting, potential soil erosion, and water costs.

30 **Sprinkler Irrigation Systems**

31 Sprinkler systems are in general use throughout California for irrigation, germination, fertilization,
32 soil softening, and cooling or frost protection. The following paragraphs include a brief
33 description of each type.

- 34 • Permanent (solid set): water is applied through permanently installed buried pipelines with
35 sprinkler attachments. This method is suitable for most soils and crops and furnishes light,
36 frequent irrigation. Permanent sets provide uniformity of application, minimal soil erosion,
37 efficient use of water, frost protection, efficient application of fertilizers, and reduced labor

1 costs after installation of the system. The advantages are offset by water loss in hot or
2 windy conditions, initial cost of installation, and high water pressure requisite to properly
3 operate the system. The pipelines, risers, valves, and sprinkler heads are assessable as
4 improvements.

- 5 • Portable (movable pipe): water is applied by means of a portable pipe system consisting of
6 main lines, laterals, and sprinklers. This method is suitable for most soils and crops, similar
7 to permanent sets, and also furnishes light, frequent irrigation. A portable system has the
8 same advantages and disadvantages as a permanent set but provides greater flexibility in
9 irrigation practices. The portion of the system that is portable, including portable pumps, is
10 assessable as personal property.
- 11 • Center pivot (circular): water is applied by means of a pipe system where the line is fixed at
12 one point and a motor propelled pipeline pivots around the fixed point. This method has
13 similar adaptability, advantages, and disadvantages compared to permanent and portable
14 systems. Because of the circular irrigation pattern, however, corners will be missed unless
15 the system is equipped with a corner irrigation attachment. The portable part of the system
16 is assessable as personal property.
- 17 • Wheel Line: water is applied by means of an irrigation system that moves through a field,
18 from one set position to another, under its own power. The wheel line system is composed
19 of a lateral wheel line, power mover, and mainline. The lateral wheel is typically composed
20 of thick-wall irrigation pipe with large wheels attached so that it may be rolled through the
21 field automatically (up to ½ mile). The pipe serves as the axle for the entire system. The
22 power mover is a gasoline powered engine which rotates the lateral wheel line so that the
23 entire system can be moved across a field by a single person. The mainline is connected to
24 the lateral wheel line by flexible pipe or hose, transports the water, and is perpendicular to
25 the lateral wheel line. Like portable systems, wheel line has the same advantages and
26 disadvantages as a permanent set but provides greater flexibility in irrigation practices. The
27 portion of the system that is portable, including portable pumps, is assessable as personal
28 property.

29 **Drip Irrigation**

30 Drip or trickle irrigation is a system where small quantities of water are usually applied through
31 polyvinyl chloride pipe (PVC) to perforated tubes and emitters located near the root zone of
32 plants. This method requires soil with adequate downward and lateral movement for proper
33 water absorption and is typically used in areas with limited water availability, excessive water
34 costs, and for intensive cropping patterns. Drip irrigation provides uniformity of application, no
35 soil erosion, efficient use of water due to minimal evaporation, less water due to placement of
36 emitters near the root zone, and a low pressure water system. These advantages are offset by a
37 high initial cost and a system that is highly automated and therefore requires extensive
38 maintenance.

ECONOMIC AND SOCIAL FACTORS

MARKETING CONDITIONS

Several important economic factors that affect real property use and consequently value are classified under the broad headings of markets, transportation, commodity prices, support services, and financial availability.

Income from any agricultural operation depends on a ready market for the commodity produced. The closer a property is located to its immediate marketing or shipping point, the greater the potential return for the commodity produced. The location of markets has considerable significance on the value of both large and small operations. For tree fruit operations in the San Joaquin Valley, citrus operations in the Coachella Valley, row crop operations in the Imperial Valley, or cattle producers in the Sacramento Valley, the proximity to local distribution and transportation centers is a significant consideration.

A central concern for agricultural operations is the cost for transportation to markets and distribution centers. For example, some timber in Northern California cannot be economically harvested due to the cost involved in getting the commodity to sawmills. Cattle operations cannot support bringing feeder cattle from long distances because this increased cost must be passed on in the price of the animal.

The perishability of a commodity is directly related to market distance, and the costs associated with preservation are either borne by the producer directly as an added expense, or indirectly through receipt of a lower commodity price. Market distance affects not only net income but also the selection of agricultural commodities that can be grown economically. A location adjacent to highways, railroads, or water transportation is important for all agricultural operations. Facilities for transporting the agricultural commodity from production, through processing, through marketing, to its final destination quickly and efficiently is a universal concern of agricultural producers.

Commodity prices are affected by external forces that have a positive or negative effect on agricultural producers and the consumers of agricultural products. Such external forces originate from all levels: international, national, regional, statewide, and county. Such external forces may include:

- Fluctuations in international currency that affect the ultimate net return to agricultural producers.
- International trading policies that open or close foreign markets.
- Interest rates or changes in the degree of competition for available credit that directly affect the cost of operations.
- Agricultural surpluses or shortages in foreign nations that affect commodity prices.
- The weather, which ultimately determines commodity yields, quality, and prices.

1 The presence of agricultural support services enhances the value of real estate. Agricultural
2 suppliers of machinery, equipment, seed, chemicals, fertilizer, and irrigation supplies are essential
3 for the prosperity of areas with productive agriculture. In addition, labor, agricultural processors,
4 storage and drying facilities, canneries, meat-packing facilities, and cold-storage facilities must be
5 available in sufficient numbers to serve the needs of agriculture. Characteristically, agricultural
6 suppliers congregate in areas where commodities are produced, and the degree to which these
7 support services are available may provide a good indicator of land value.

8 **USE PATTERNS**

9 Conformity with prevailing use patterns generally contributes to property values in agricultural
10 communities. When a land use differs from the normal land use pattern, the per acre value may
11 vary from the norm depending on the difficulty of converting the land to prevailing use patterns.

12 Land use has an important effect on the income earning potential for any property. By virtue of
13 this, agricultural production and price statistics are vital to the valuation of agricultural properties.
14 A large volume of statistical data regarding agricultural production is available for review and
15 analysis. The United States Department of Agriculture (USDA) annual publication, *Agricultural*
16 *Statistics*, provides data on crop yields and commodity prices for all regions of the United States.
17 County extension offices usually have recent, relevant crop data, and the Agricultural Statistics
18 Branch of the State Department of Food and Agriculture publishes an annual report on crop
19 yields and commodity prices on all regions throughout California. The Natural Resources Ser-
20 vice (NRSCS) and the Agricultural Stabilization and Conservation Service
21 (ASCS) also provide data on yields and prices throughout the state. The University of California
22 at Davis and California State University, Fresno, both conduct research and provide extension
23 services regarding cultural practices and statistical data on agricultural production in California.

24 When analyzing land use patterns, attention must be focused on whether the majority of land is
25 operated by owners or by tenants. Information regarding typical landlord-tenant lease/rental
26 agreements for a particular area should be gathered, including whether cash rents or share crop
27 arrangements are common. The typical percentage arrangement charged for property
28 management services should also be determined. Information regarding these arrangements are
29 ordinarily available from the Farm Credit System branch offices, local commercial bankers, ASCS
30 offices, county extension offices, and colleges or universities.

31 The type and frequency of property transfers help to determine future land value trends for a
32 particular area. Identification of the parties to each transaction is essential and establishes
33 whether land purchasers are operators in expansion modes, new operators relocating to the area,
34 or individuals adapting the land to alternate uses.

35 **CULTURAL, OPERATIONAL, AND MANAGEMENT FACTORS**

36 Cultural and operational factors furnish a general view of current agricultural production for an
37 area. This information is beneficial in developing income estimates and for comparing a property's
38 yields with those prevalent for a particular area. If a property's yields or the prices obtained for its

1 commodities are substantially different from the typical reported, an analysis should be made to
2 determine the reasons for the variance. The variance may be caused by the property's present
3 management.

4 The effect of property management (method of operation) on both land use and the property
5 operation is an important aspect of any appraisal. An analysis regarding the competency of a
6 particular owner-operator may be part of the specific data compiled for an agricultural appraisal.
7 Management ability varies by individual or company, and where poor management techniques are
8 evident, property productivity or net income may be lower. It may be necessary to adjust yield
9 expectations to reflect likely property management.

10 **LAND USE RESTRICTIONS**

11 Agricultural farmland actually has two values. One value is predicated on its current use as a
12 producer of agricultural products, and the second value is predicated upon its worth as land for
13 potential commercial, industrial, or residential development. A federal study commissioned in
14 1980 determined that agricultural farmland was disappearing (removed from production) at a rate
15 of approximately three million acres per year. While this figure has been challenged, it is firmly
16 established that productive farmland is disappearing in California by virtue of continued
17 development and urban growth.

18 Economic forces are inclined to progress toward the highest and best use, that use which renders
19 the most profitable return from the land. To slow this trend, however, state and local government
20 programs have been established to preserve agricultural land as farmland, similar to regulations
21 for urban land designed to achieve local public goals of residential, commercial, and industrial
22 development. These programs include the California Land Conservation Act (Williamson Act),
23 Farmland Security Zones (Super Williamson Act), agricultural zoning, general land use plans, and
24 legally enforceable restrictions. The majority of the restrictions are concerned with the
25 preservation and use of land for specific agricultural purposes, not with distinctions between
26 permitted uses.

27 In 1965, the Legislature enacted the California Land Conservation Act (CLCA) in an effort to
28 preserve agricultural lands for the exclusive production of food and fiber, and to discourage
29 noncontiguous development. The legislation was an attempt to halt or at least to hinder the
30 alarming increase in real property taxes on farmland by providing methods for restricting land use
31 to agricultural purposes. To further these efforts, the Legislature enacted provisions allowing the
32 creation of Farmland Security Zones in 1998.

33 Section 402.1 of the Revenue and Taxation Code⁴ deals with land use restrictions and, in
34 particular, zoning, recorded contracts with governmental agencies, permits issued by
35 governmental agencies, conservation easements, and environmental constraints. This section
36 explains that there is a rebuttable presumption that restrictions will not be removed or
37 substantially modified in the predictable future and that the enforceable restrictions will

⁴ All statutory section references are to the Revenue and Taxation Code unless otherwise designated.

1 substantially equate the value of the land to the value attributable to the legally permissible use or
 2 uses. For a comprehensive analysis and explanation of the California Land Conservation Act,
 3 please refer to Part II of this manualhandbook.

4 Zoning is the principal example of state and county police powers that affect land use.
 5 Essentially, zoning refers to the division of land into distinct areas with different use and density
 6 regulations. Agricultural zoning essentially sets aside specific areas for broadly defined
 7 agricultural purposes that include conventional growing crops, timber, grazing, and recreation.
 8 Zoning is a legally binding designation of permitted uses for a respective area based on
 9 governmental interpretation of the public's health, safety, and welfare.

10 Agricultural zoning varies with each local county and city government and the types of agriculture
 11 conducted in each area. Zoning ordinances normally include the following elements:

- 12 • A statement of purpose (e.g., preservation of agricultural lands)
- 13 • Permitted uses
- 14 • Conditional or special uses requiring prior approval
- 15 • Standards governing the permitted and conditional uses
- 16 • A zoning map or other distinct form of identification

17 Agricultural zoning ordinances differ significantly, but the main point is the extent to which they
 18 limit the encroachment of nonagricultural uses into productive agricultural areas.

19 Closely related to preserving the land for agricultural use is the preservation of the environment.
 20 One legal tool for environmental preservation is the conveyance of a conservation easement, the
 21 purpose of which is to retain land predominantly in its natural, scenic, historical, agricultural,
 22 forested, or open-space condition.⁵ By law, a conservation easement is an interest in real property
 23 voluntarily created and freely transferable in whole or in part.⁶ The particular characteristics of a
 24 conservation easement are those granted or specified in the instrument creating or transferring the
 25 easement.⁷

26 Despite a conservation easement's legal status as an interest in real property, the conveyance of
 27 such an interest does not generally constitute a change in ownership of the property subject to the
 28 easement, where the primary purpose of the easement is the mere right to enforce *restrictions*
 29 (i.e., negative covenants) against the grantor. This is because, in such a case, with respect to the
 30 property subject to the easement, the conveyance would constitute neither a transfer of the
 31 beneficial use nor a transfer of an interest with a value substantially equivalent to that of the fee.
 32 Revenue and Taxation Code section 60 requires that a conveyance satisfy both conditions in order
 33 for a change in ownership to occur.

⁵ Civil Code section 815.1.

⁶ Civil Code section 815.2.

⁷ Civil Code section 815.2.

1 While an easement created pursuant to Civil Code section 815.1 may not give rise to a change in
2 ownership, the restrictions on use are considered enforceable restrictions for purposes of
3 section 402.1, which provides that the assessor must consider the effect upon value of such
4 restrictions.⁸ As a practical matter, the majority of conservation easements will be treated for
5 assessment purposes in accordance with section 402.1.

6 Under section 402.1, the creation of a conservation easement does not result in an automatic
7 reduction in the assessed value of the property subject to the easement. Instead, the assessor
8 must enroll the lower of (1) the existing factored base year value or (2) the current market value
9 considering the restrictions on use imposed by the easement. Only upon a subsequent change in
10 ownership would the assessor establish a new base year value that accounts for the restrictions
11 under the easement.

12 That treatment differs from properties subject to *agricultural conservation easements* under
13 section 421.5 and Government Code section 51256. Properties encumbered by agricultural
14 conservation easements are subject to assessment pursuant to section 423, which mandates that
15 enforceably restricted open-space lands are to be valued by a prescribed capitalization of income
16 method, rather than by reference to data on sales of otherwise comparable lands.⁹

17 Apart from conservation easements, Ffederal and state environmental laws have a tremendous
18 effect on agriculture because numerous activities on farms produce wastes or emissions that are
19 potentially detrimental to the environment. Environmental regulations have altered numerous
20 traditional cultural practices and forced agricultural producers to adopt new and, in some cases,
21 extremely expensive practices. Two legislative acts, the Clean Air Act of 1970 and the Clean
22 Water Act of 1972, identified specific environmental concerns and focused public attention on
23 agricultural practices. Agricultural producers are no longer permitted to allow unrestricted water
24 runoff from chemically treated fields, and burning of farm residues or use of smudge pots for frost
25 protection are now subject to regulation by the Environmental Protection Agency (EPA).
26 Potentially toxic discharges of chemically contaminated water runoff from farming operations are
27 now subject to close scrutiny, and chemical fertilizers and pesticides essential for many farming
28 operations can now only be applied in strict accordance with EPA regulations. In addition, the
29 federal Endangered Species Act of 1973 and the California Endangered Species Act are
30 environmental regulations that affect California agriculture. These acts impact the ability of
31 agricultural producers to carry out many long-standing, routine agricultural practices or to
32 maximize the productive capability of the land due to land use restrictions designed to protect
33 threatened and endangered wildlife species.

⁸ Civil Code section 815.10.

⁹ Effective January 1, 2003, Revenue and Taxation Code section 421.5 was amended to clarify that, for purposes of valuing open-space land subject to an enforceable restriction, the term "agricultural conservation easement" has the same meaning as defined in section 10211 of the Public Resources Code (Statutes of 2002, Chapter 616, Senate Bill 1864).

SUMMARY

1

2 Physical, economic, and social forces are not separate but must be viewed as interacting in ways
3 that affect agricultural land values. These forces include soil, climate, and water characteristics,
4 land use characteristics, area support services, marketing conditions, land use and ownership
5 patterns, national and international economic trends, governmental forces, and land use and
6 environmental restrictions.

7 Soil and climate are two dominant physical characteristics that affect agricultural property values.
8 Conforming land use patterns for an area create value formation by considering the possibilities
9 and limitations afforded by climate and soil. Governmental forces at every level affect the value
10 of real property through zoning, land restrictions, and commodity programs. Area services affect
11 land values through the interaction of markets, transportation systems, support businesses, and
12 financial institutions.

13 The best indication of current market value for agricultural properties is still obtained from recent
14 real estate market transactions—the review and analysis of open-market, confirmed sales of
15 similar agricultural properties.

CHAPTER 3: APPRAISAL PROCESS

DEFINITION

Although the appraisal of property for tax purposes includes aspects that are different from private fee appraisal, the same basic methods and techniques apply to both.

An appraisal is an opinion of value. In order to accurately and systematically arrive at such an opinion, a logical method of collecting, analyzing, and processing data must be developed in order to make a sound judgment of the value of a specific agricultural property.

STEPS IN THE APPRAISAL PROCESS

There are seven steps in the appraisal process:

1. Definition of the appraisal problem
2. Preliminary analysis and data collection
3. Highest and best use analysis
4. Land value estimate
5. Application of the approaches to value
6. Reconciliation of value indicators and the final value estimate
7. Reporting the final value estimate

DEFINITION OF THE PROBLEM

The definition of the appraisal problem contains five steps:

- Identification of the property being appraised
- Identification of the property rights involved in the appraisal
- Determination of the purpose of the appraisal
- Establishing the effective date of the appraisal
- Obtaining the definition of value for the appraisal

It is necessary to establish the kind of value that is being sought (e.g., market value, ad valorem investment value, insurance-insurable value, estate value, Williamson Act value, lending purposes), identify the appraisal unit typically transferred in the marketplace, determine the rights being appraised (fee simple absolute, leasehold, leased fee, except for taxable possessory interests), and ascertain the effective date of the appraisal (for tax purposes it is the date of change in ownership or new construction if after March 1, 1975, or the lien date for appraisals where reductions in value apply).

1 **PRELIMINARY ANALYSIS AND DATA COLLECTION**

2 The preliminary analysis phase develops a logistical plan for the appraisal. This step includes a
3 preliminary inspection of the agricultural property and its surroundings; a list of the data, time,
4 and resources needed; a preliminary estimate of the property's highest and best use; and a
5 selection of the primary approaches to value that will be utilized.

6 A competent appraisal is supported by information from the marketplace. This information is
7 referred to as market data, and all relevant data about the property should be considered,
8 including primary data collected in the field and data from secondary sources. Market data may
9 be divided into general, specific, and comparative categories.

10 General data pertain to information about trends in the environmental, social, economic, and
11 governmental forces that affect property values. Trends occur at the national, regional,
12 community, and neighborhood levels. Specific data pertain to the subject property itself. For
13 example, both the parcel and its improvements are examined to gather information regarding their
14 utility, as well as financial and operating information. Comparative data pertain to the physical,
15 financial, and operating characteristics of comparable properties that will be used in the appraisal
16 process.

17 **HIGHEST AND BEST USE ANALYSIS**

18 After determining the data requirements and collecting the data, an analysis of the property's
19 highest and best use in light of market forces is completed. The value estimate is predicated on
20 the assumption that the highest and best use has been identified. Under competitive market
21 conditions there is a strong tendency for property to be used in the most productive manner. The
22 determination of highest and best use is also necessary in order to select the comparable sales
23 utilized in the appraisal process.

24 **LAND VALUE ESTIMATE**

25 A separate estimation of land value is needed for at least two reasons. Both the cost approach
26 and the building residual technique in the income approach require separate land value estimates.
27 When land value is subtracted from the total property value, the contributory value of the
28 improvements can be estimated. Another reason for a separate estimate of land value is that the
29 Revenue and Taxation Code requires an allocation of the total property value between land and
30 improvements.

31 **APPLICATION OF THE APPROACHES TO VALUE**

32 The three approaches to value are the cost approach, the comparative sales approach, and the
33 income approach. An important step in the appraisal process is the determination of the
34 appropriate method or methods by which the value will be estimated. Typically, the appraiser
35 considers three primary approaches to value. Each approach simulates the thought processes of
36 the typical buyer in a competitive market.

1 For a comprehensive discussion of the three approaches to value, please refer to Assessors'
2 Handbook Section 501, *Basic Appraisal*.

3 **RECONCILIATION OF VALUE INDICATORS AND THE FINAL VALUE ESTIMATE**

4 The final value estimate is the next step in the appraisal process. While the value estimate
5 represents an opinion of value, it should be a reasoned opinion based on verified market data.

6 The appraiser must estimate the present worth of anticipated future net benefits through one or
7 more of the three methods of processing data into value indicators—the comparative sales
8 approach, the capitalized income approach, and the cost approach.

9 Theoretically, the approaches to value should produce a fairly tight range of value indicators. In
10 practice, however, this rarely occurs. Significant differences frequently occur among the value
11 indicators, so to arrive at a final estimate of value a reconciliation of the value estimates from the
12 approaches must be completed. Estimates should be reconciled using the criteria of:

- 13 • The appropriateness of the approach given the purpose of the appraisal
- 14 • The adequacy and reliability of the data available to perform the appraisal

15 The final estimate of value is not simply the arithmetic average of the value estimates produced by
16 the approaches utilized. Rather, the final value estimate must reconcile all available indicators
17 plus relevant market considerations. Reconciliation is the process of critically evaluating how
18 well each indicator reflects the factors influencing the value of the subject property. The appraiser
19 should weigh most heavily that indicator which best measures the type of benefits the subject
20 property yields. Data should be independently processed for each approach to value. No method
21 of appraisal should be forced to agree with any other method. An important consideration is that
22 each approach be objectively developed.

23 **REPORTING THE FINAL VALUE ESTIMATE**

24 This is the final step in the appraisal process where the appraiser presents a reasoned opinion
25 supported by factual data that can be independently evaluated by an observer. The narrative
26 portion centers around those facets of the appraisal process that are of particular relevance in
27 agricultural appraising.

28 **PROPERTY USE**

29 Highest and best use is not an absolute fact, but reflects an opinion of the best and most profitable
30 use of the property based on an analysis of prevailing market conditions. Highest and best use is
31 defined as:¹⁰

¹⁰ *The Appraisal of Real Estate*, 11th Edition, Appraisal Institute (Chicago, 1996), p. 50.

1 The reasonably probable and legal use of vacant land or improved property, which
2 is physically possible, appropriately supported, financially feasible, and that results
3 in the highest value.

4 The use of land can be restricted by existing crops or improvements. The highest and best use for
5 land is usually determined as though the land is vacant and ready to be put to its highest and best
6 use. If the property is improved (e.g., with structures, a permanent irrigation system, or living
7 improvements), analysis of the highest and best use as improved is also important. Analysis of
8 current and potential uses resolves whether the property is currently being used for its highest and
9 best use or whether the current use should be changed. Among all reasonable or alternative uses,
10 the use that provides for the greatest return to the land is generally considered to be the highest
11 and best use of the land as though vacant.

12 A highest and best use analysis is necessary for the proper selection of appropriate agricultural
13 comparable sales for use in the three major approaches to value. Comparable sales must have the
14 same highest and best use as the subject property.

15 Highest and best use of the property as improved pertains to the optimal use that could be made
16 of a property including the existing crops or improvements. The inference is that the existing
17 crops or improvements should be retained in their current form as long as they contribute some
18 market value, or until the return from new potential uses or improvements is greater than the cost
19 of removing the existing improvements and constructing new ones.

20 The establishment of a land's optimal use demands prudent analysis of all reasonable alternative
21 uses. Three significant points should be noted in estimating a property's highest and best use:

- 22 • Surrounding land uses may not be indicative of optimal use
- 23 • The existing use of the subject property may not be optimal
- 24 • Current zoning and other governmental regulations may restrict a property's highest and
25 best use

26 When appraising agricultural properties, consideration must be given to whether the use of the
27 property is long term or interim. If not long term, then thought should be given regarding the
28 type of operation that will provide the greatest return to the land, such as conversion from row
29 crop land to vineyards or orchards.

30 An existing agricultural use may not be the highest and best use for the entire property, especially
31 in areas of swift transition to residential or commercial uses. The present use, called an interim
32 use, usually continues until transition to an alternate use is economically feasible. Agricultural
33 properties in transition from an interim to an alternate use illustrate the principle of consistent use
34 which asserts that land cannot be valued on the basis of one use and improvements valued on the
35 basis of another use. A corollary to the principle of consistent use involves appraising agricultural
36 property to determine market value. By virtue of the fact that market value represents the most

1 probable selling price, the final estimate of value should reflect the most probable utilization of the
2 property.

3 Current zoning ordinances may not be compatible with a property's theoretical highest and best
4 use. If the probability of a zoning change exists, the potential effect on the subject property's
5 market value should be considered (but see section 402.1, which establishes a rebuttable
6 presumption that current restrictions such as zoning will not be removed or modified in the
7 predictable future). Changes to zoning ordinances often trail behind current market activity and,
8 consequently, may conflict with the highest and best use for a particular agricultural property.

9 **UNIT TO BE APPRAISED**

10 Appraisal and market value concepts inherently involve a determination of the unit being
11 appraised. Section 51(d) defines the appraisal unit for real property as it relates to adjustments to
12 base year value. It states:

13 For purposes of this section, "real property" means that appraisal unit that persons
14 in the marketplace commonly buy and sell as a unit, or that is normally valued
15 separately.

16 This is the statutory basis for any determination of the appraisal unit. When a parcel of real
17 property changes ownership and requires a reappraisal for property tax purposes, the appraiser
18 must determine the unit commonly bought and sold in the marketplace. If an individual parcel is
19 purchased, then this comprises the appraisal unit. If active market participants typically buy and
20 sell multiple parcels (which form an economic unit), then this comprises the appraisal unit.
21 Market value for the multiple parcels is determined and allocated among the respective parcels.

22 The appraisal unit must be determined in order to know the appropriate level of research and
23 market data to be obtained. For example, what is the unit if a dairy and a home on a lot next to it
24 are sold? Is the unit the dairy and the house, or are the dairy and house two separate units? An
25 analysis of market transactions would determine what is typically bought and sold.

26 When the unit to be appraised is not clearly defined, the appraiser must make an informed
27 judgment based on the market data available in determining the proper unit. Decisions should be
28 the result of a factual consideration of probable ownership, use, and location. The appraiser's
29 decision should reflect the unit most likely to be sold if the property were exposed to the open
30 market. In a vineyard operation, the most probable unit is the vineyard as a whole except when
31 one parcel is used for an entirely different purpose; for example, a cold-storage facility. The
32 vineyard as a whole is often referred to as the unit concept and county assessors often use the unit
33 concept when appraising multi-parcel agricultural operations.

34 The preceding paragraphs have dealt with the problem of appraising agricultural property as a
35 unit, but property tax law requires a separate assessment of each parcel of property and, within
36 each parcel, separate assessments of land, improvements, and personal property. However,

1 statutes do not require separate appraisals of these different segments of a unit property. The
 2 separate figures are, in the majority of cases, only an allocation of the total property value. (It is
 3 important to make reasonable allocations because (1) some taxes and fees are levied on land only
 4 or land and improvements only, and (2) correct base year values are critical in the case of removal
 5 of an improvement or change in ownership of part of the original unit.)

6 The following examples are taken from actual appraisal situations encountered by county
 7 assessors throughout California.

8 **EXAMPLE - 1¹¹**

9 A father and son own a total of nine individual parcels (containing a total of 980 acres with the
 10 smallest parcel 40 acres and the largest parcel 320 acres) planted to row crops and almonds.
 11 ~~Each~~ ~~The~~ ~~parcels~~ ~~has~~ ~~have~~ a distinct legal descriptions, separate assessor's parcel numbers, and are
 12 located contiguously. The father and son operate as a partnership and share equipment,
 13 improvements, water, and labor costs.

14 **Unit To Be Appraised**

15 In this instance, the smallest individual parcel (40 acres) is considered by the marketplace to be an
 16 economic unit, and each individual parcel constitutes a separate appraisal unit and should be
 17 valued accordingly. It would be inappropriate to combine the market value for the various
 18 parcels, separated by ownership, and allocate the total market value over the total acreage owned
 19 by each individual because of different cropping patterns, no unity of ownership, and divergent
 20 values between row crop land and almonds.

21 **EXAMPLE - 2**

22 A grower owns three contiguous parcels; one parcel contains 216 acres of peaches, one parcel
 23 contains approximately 100 acres of prunes, and the third parcel contains 10 acres improved with
 24 a 40,000 square foot cold-storage and packing facility. The storage facility serves the grower and
 25 two other farmers. Larger parcels of agricultural farmland that are adaptable to agricultural
 26 improvements or homesites sell for considerably less than smaller parcels.

27 **Unit To Be Appraised**

28 In this instance, there is an absolute unity of ownership and location. However, the cold-storage
 29 facility constitutes a different use comprising an economic unit by itself so it should be valued
 30 separately from the orchard operation. It would be logical to conclude that growers in the area
 31 might seek additional orchard acreage for expansion but would not necessarily be in the market
 32 for a cold-storage facility.

¹¹ All examples throughout this ~~manual~~ handbook are for demonstrative purposes only and are not meant to reflect
 conditions in any part of the state.

1 EXAMPLE - 3

2 A cattle rancher owns 26 separate parcels (mostly grazing lands on rolling land and foothills) |
3 containing approximately 12,800 acres. Numerous parcels are not contiguous and in most cases
4 the parcels are bordered or enclosed by public lands administered by the United States Forest
5 Service and Bureau of Land Management. The rancher has contracts with the two governmental
6 agencies for limited grazing permits on adjacent noncontiguous federal land. Ranch sales might
7 include the transfer of the grazing permits.

8 Unit To Be Appraised

9 Cattle and other livestock operations of this type could utilize public lands to make up an
10 economic unit. Depending on the policies of a federal administration, grazing permits may or may
11 not be issued and have no guarantee of transferability. The possessory interest created by a
12 grazing permit should be valued separately, not with the fee simple land, and solely on the basis of
13 the actual grazing that the government permits on an annual basis.

14 TOOLS AND DATA SOURCES

15 Numerous general data sources are available to assist in the appraisal of agricultural property.
16 Some of the more readily available and useful data sources are discussed below.

17 U. S. GEOLOGICAL TOPOGRAPHIC SURVEY MAPS

18 United States Geological Survey (USGS) maps (commonly called "topo maps") are beneficial in
19 determining topography, location, and access for all areas throughout California. The maps are
20 7.5 and 15 minute quadrangles. The scale on a 7.5 minute quad is 2.64 inches per mile; the 15
21 minute quad has a scale of 1 inch per mile. The maps show the location of roads and waterways,
22 and are shaded by color to show forest areas and vegetation. The maps are available at the USGS
23 western regional office in Menlo Park, California.

24 AERIAL PHOTOGRAPHS

25 The Agricultural Stabilization and Conservation Service (ASCS) provides aerial photographs for
26 all farmable land in California. The maps are based on a scale of 1" equals 660 feet, show
27 ownership lines, and in some cases provide field acreage. The maps assist in the location of
28 property lines, placement of improvements, tree counts, and identification of problem soil areas.
29 Land measurement utilizing aerial photographs requires caution because:

- 30 • Errors may exist for any single photograph
- 31 • Variations in scale
- 32 • Camera tilt
- 33 • Terrain slope

1 A variation in scale is caused by the distance between ground level and aerial camera height.
2 Differences in aerial photo elevations will result in discrepancies in the photo scales and this in
3 turn would result in incorrect land measurements. Camera tilt results in inaccuracies along the
4 aerial photo edges. Terrain slope results in smaller than actual readings when the ground slopes
5 away from the camera, and larger than actual readings when ground slopes toward the camera.

6 The most accurate area of an aerial photo is the center portion, so all measurements should be
7 verified against that section. The maps are available through ASCS field offices.

8 **CROPPING INFORMATION**

9 The California Department of Food and Agriculture and the United States Department of
10 Agriculture periodically release crop yield reports for the State of California and all counties. An
11 analysis of cropping patterns can assist in estimating and projecting future crop yields.

12 Both crop rotation and crop varieties have a noticeable effect on yields. The constant
13 introduction of new and more popular varieties frequently results in significant increases in yields.
14 Crop rotations affect long-term productivity, and periodically land needs to be removed from
15 production to lie fallow. A crop rotation which takes this fact into consideration ultimately plays
16 an important role in obtaining optimal production yields. Soil capability, weather variations, and
17 the effects of technological changes directly influence yields and rotations. Knowledge of crop
18 yields, commodity prices, cultural costs, and cultural practices is indispensable in agricultural
19 appraising. Appendix 2 lists numerous sources of information.

20 County Extension offices publish manuals, bulletins, and leaflets regarding crop rotations, crop
21 yields, and costs for various cultural practices. These publications provide an excellent starting
22 point for gathering income and expense data on a wide range of crops.

23 County agricultural commissioners are required to annually publish an agricultural crop and
24 livestock report for their county. The report presents statistical data pertaining to acreage, yields,
25 commodity and livestock prices, and the gross value of agricultural production in the county.

26 **VALUE APPROACHES**

27 Value equals the present worth of anticipated future net benefits. In order to measure the value of
28 future net benefits, three major appraisal methods for processing data into value indicators are
29 utilized. These include the cost approach, the comparative sales approach, and the income
30 approach. The applicability of each approach depends upon the nature of the market. If there
31 were always an abundance of market sales and comparable sale properties were close substitutes,
32 the comparative sales approach would be the only technique needed.

33 In the absence of sales of comparable properties, the other two approaches to value assume
34 greater importance. If the subject property is owned for the purpose of obtaining income through
35 agricultural production and there is an active market for agricultural properties, the income

1 approach usually becomes more reliable. If there are limited sales and insufficient rental data for
2 comparable properties, the cost approach assumes greater significance.

3 It is not always possible to utilize all three approaches to value in each individual appraisal. The
4 nature of the property, the nature of the market, and the availability of data will normally dictate
5 which approach(es) are most applicable. As single-family residential properties are infrequently
6 owned solely for their rental income, the cost and comparative sales approaches to value are most
7 appropriate. Agricultural and commercial properties may be appraised by utilizing all three
8 methods, but limited sales of similar comparable properties may make the cost and income
9 approaches the more reliable indicators of value.

10 The appraiser, therefore, must analyze all data available on a property and utilize the most
11 applicable approach(es) in the appraisal. This procedure is supported by California Code of
12 Regulations, Property Tax Rule 3, which states:

13 In estimating value as defined in section 2, the assessor shall consider one or more
14 of the following [approaches to value], as may be appropriate for the property
15 being appraised. . . (Emphasis added.)

16 Independent processing of available data will lead to separate indicators of value. The next step is
17 to reconcile the several indicators into a final estimate of value. In the reconciliation process,
18 each indicator is reviewed and each critical estimate is re-analyzed. Consideration should be given
19 to any factors influencing value that are either not reflected or only partially reflected in the
20 indicators. The greatest weight should be afforded that approach which best measures the subject
21 property.

22 **COST APPROACH**

23 Sometimes referred to as the summation approach, the cost approach is the sum of the estimated
24 land value and the estimated cost new of the improvements less depreciation. The cost approach
25 to value is the most universally applied approach in the appraisal of property for tax purposes—and
26 ~~it is not difficult to understand why~~. The replacement cost approach is the one approach that can
27 be applied to all improved properties (and personal property). Many properties are infrequently
28 sold and/or do not yield calculable money incomes, but costs have been incurred for all improved
29 properties. In addition, it is generally desirable to make a cost estimate in addition to using other
30 applicable approaches in the appraisal process.

31 California Code of Regulations, Property Tax Rule 6(a) directs when to use the cost approach:

32 The reproduction or replacement cost approach to value is used in conjunction
33 with other value approaches and is preferred when neither reliable sales data
34 (including sales of fractional interests) nor reliable income data are available and
35 when the income from the property is not so regulated as to make such cost
36 irrelevant. It is particularly appropriate for construction work in progress and for
37 other property that has experienced relatively little physical deterioration, is not

1 misplaced, is neither over- nor underimproved, and is not affected by other forms
2 of depreciation or obsolescence.

3 Reproduction cost is the outlay required as of a certain date to replace an existing structure with
4 an exact replica. This variant of the cost approach is of limited usefulness because it is frequently
5 not possible nor desirable to replace an existing structure with an exact replica due either to the
6 lack of certain materials or trade skills, or because of the functional obsolescence of the older
7 structure.

8 Replacement cost is the cost required as of a certain date to replace an existing structure with one
9 possessing equivalent utility. This concept is widely accepted in appraisal practice. The appraiser
10 must estimate not only replacement cost new, but also the accrued depreciation in the structure,
11 which is the most difficult aspect of applying the replacement or reproduction cost approaches.

12 For property tax appraisal purposes, depreciation is defined as the loss in value from any cause,
13 and it is the measure of the loss in value experienced by a property compared to a hypothetical
14 and similar property that has suffered no depreciation. Depreciation in the appraisal sense is the
15 difference between the present market value of improvements and their replacement cost new. To
16 estimate depreciation appraisers commonly refer to published "percent good tables" which relate
17 age to remaining value. Table depreciation includes normal amounts of physical deterioration and
18 functional obsolescence. The depreciation allowance must be modified if the property exhibits
19 above average or below average amounts of physical deterioration, and functional and/or external
20 obsolescence.

21 Functional obsolescence is a loss in value of a structure or item of equipment due to a decline in
22 capacity to perform the function for which it was intended. Functional obsolescence may be due
23 to poor initial design, changing market tastes, or changes in construction techniques.

24 Adverse factors that are external to the property being appraised cause external obsolescence and
25 a loss in value. These external factors usually affect more than one property in the area and
26 cannot be controlled by an individual property owner. External obsolescence may be caused by
27 environmental factors, illustrated by industrial encroachment on a residential neighborhood, or by
28 the shifting of the basic means of employment away from a community. Losses in value
29 attributable to external obsolescence are usually beyond the power of any one individual to
30 influence and cannot be cured by making changes to the subject improvement. This type of
31 depreciation affects both land and building values.

32 The concept of replacement cost has particular relevance for agricultural improvements because
33 of technological advances. Generally, older structures (Dakota style barns) are replaced by
34 newer, different style improvements with equivalent or superior utility.

35 **Cost New Factors**

36 Reliable cost data sources for agricultural appraising include the following publications which are
37 updated periodically to reflect changes in local and statewide costs:

- 1 • Assessors' Handbook Section 534, *Rural Building Costs*, published by the State Board of
- 2 Equalization
- 3 • Marshall and Swift Commercial Cost Handbook
- 4 • Independent Contractor Data

5 **COMPARATIVE SALES APPROACH**

6 The comparative sales approach may be defined as any approach that uses direct evidence of the
7 market's opinion regarding the value of a specific property. Ideally, this approach involves an
8 opinion of value backed by the outlay of money—in other words, actual purchases of comparable
9 properties. In addition to actual transfers, the approach may consider listings, offers, options, and
10 the opinions of owners, real estate agents, and appraisers as to the selling prices properties could
11 command.

12 The comparative sales approach is based upon the principle of substitution. It is presumed that
13 the sale price of a property will approximate the sale prices, and to a lesser degree, the listings,
14 offers, and appraisals of competitive substitutes. In a competitive market, all properties that are
15 close substitutes have approximately the same value. With a perfect degree of substitution and
16 strongly competitive market conditions, properties would have exactly the same value. Actually,
17 no two properties or commodities are ever identical—all differ at least in location. However, they
18 may be reasonable substitutes if all relevant economic characteristics are similar.

19 Bargaining is characteristic of the real estate market and most sales, even perfect economic
20 substitutes, frequently sell for different amounts. This is the nature of the real estate market.
21 Market values of real estate are more realistically described as a range of values rather than a
22 specific point. An appraisal establishes an expected range of value for a specific property and
23 hopefully, when the property transfers, the sale price will fall within the anticipated range of
24 values. For a comprehensive discussion of the comparative sales approach, please refer to the
25 Assessors' Handbook Section 501.

26 In contrast to the cost and income approaches, the comparative sales approach offers direct rather
27 than indirect evidence of market value. It is the preferred method when there are sufficient sales
28 available to invite comparison with the subject property and the ability to adjust the selling prices
29 of the sold properties to make them truly comparable.

30 California Code of Regulations, Property Tax Rule 4, prescribes the manner in which appraisers
31 must apply the comparative sales approach. Several conditions must be met:

- 32 • Noncash consideration (e.g., personal property) included in the transaction must be
- 33 converted to its cash equivalent
- 34 • Seller-paid loan points charged by a lender must be deducted from the nominal sale price
- 35 • Assumed loans, promissory notes, or other paper consideration must be converted to their
- 36 cash equivalents

- 1 • The positive or negative value of a lease encumbering the property at the time of sale must
2 be added to or subtracted from the selling price
- 3 • The sale prices of comparable properties must be adjusted for any change in the price level
4 of this type of property between the time the sale price was negotiated and the date of
5 valuation of the subject property
- 6 • Appropriate allowances for differences between the comparable properties at the time of
7 sale and the subject property on the valuation date, as to physical attributes, location,
8 enforceable restrictions upon use, anticipated income, and amenities must be made

9 **Market Units of Comparison**

10 It is helpful to express the adjusted selling prices of comparable sales in terms of a unit selling
11 price that can readily be applied to the subject property. The most common unit of comparison in
12 agricultural appraising is price per acre, although comparisons may also be made on the basis of
13 price per animal unit, price per ton, and price per cwt. (100 pounds). When analyzing available
14 data, it may be helpful to utilize more than one unit of comparison. These comparisons may be
15 used to determine whether there are consistent relationships between value per acre and value per
16 unit of production. After a price per unit of comparison has been established for all the
17 comparable sales, the indicated unit value is applied to the subject property to arrive at an
18 estimate of value.

19 Unit sale prices that have not been adjusted should not be applied directly to the subject property.
20 Once a unit price range based on a consistent unit of comparison has been ascertained for all the
21 comparable sales, a basis has been firmly established for calculating an appropriate unit value for
22 the subject property.

23 For instance, agricultural land sales can be expressed in terms of selling price per acre. Single-
24 family residential sales lend themselves to selling price per square foot of gross living area;
25 commercial property sales are commonly expressed as selling price per square foot of net rentable
26 area; and sales of income-producing multi-family residential properties are commonly reduced to
27 price per unit, price per room, or price per square foot. Comparable sales must be judiciously
28 selected and adjusted before converting them into appropriate units of comparison.

29 **Sale of Subject Property**

30 When valuing property as the result of a change in ownership, section 110(b) and Rule 2(b)
31 provide a rebuttable presumption that the amount of monetary consideration or its equivalent paid
32 for real property sold is its "full cash value." If the assessor chooses to rebut the presumption, it
33 must be done by a "preponderance of the evidence" establishing that the consideration paid is not
34 market value. This rebuttable presumption does not apply to transfers of taxable possessory
35 interests, changes in control of legal entities through stock acquisition, transfers of partnership
36 interests, or any unreported transfers for which no change in ownership statement was timely
37 filed. Rule 2 also requires that for transfers of more than one parcel, the purchase price must be
38 allocated among the sold parcels in proportion to the relative fair market value of each.

1 Application of the comparative sales approach includes identifying differences between the
2 comparable properties and the subject, quantifying the value impact of the differences, and
3 applying an appropriate adjustment technique. Significant differences between the comparable
4 properties and subject property are adjusted by increasing or decreasing the respective elements of
5 comparison.

6 A determination of the significant differences between the subject property and the comparable
7 properties is basic for any appraisal analysis. These differences are the core issues that must be
8 addressed in the data analysis. Identifying the truly significant differences between the subject
9 property and comparable properties provides the means to accurately measure the dollar value for
10 any difference to arrive at a final value estimate.

11 The number of possible differences for any one appraisal is endless. All characteristics of the
12 subject and comparable properties are considered during the appraisal process, but the appraisal's
13 main purpose is to identify and measure the differences that have the greatest effect on value as
14 recognized by the marketplace. Among the elements of comparison are:

- 15 • Financing terms
- 16 • Conditions of sale
- 17 • Market conditions
- 18 • Location
- 19 • Physical characteristics
- 20 • Income characteristics

21 **Financing Terms**

22 The sale price of a specific property may vary from that of an identical property because financing
23 terms differ between the two properties. Potential buyers of a property may be willing to pay
24 more than market value to assume an existing mortgage with favorable below-market financing
25 terms.

26 Agricultural properties are frequently sold on contracts of sale with minimal down payments and
27 seller financing for the balance of the sale price. An analysis of such a transaction must be
28 conducted to determine whether the financial arrangements are, in fact, a reasonable
29 representation of the marketplace and that the sale constitutes a bona fide transaction. The best
30 method for such an analysis is to compare cash sales with seller-financed sales of comparable
31 properties to determine whether an adjustment to a seller-financed sale is necessary. If there is no
32 apparent difference between cash sales and seller-financed sales, no adjustment is necessary for
33 those seller-financed sales that are comparable to the typical ~~seller-financed~~ cash sales. An
34 alternative method is to compare the terms of a seller-financed sale to the terms required by a
35 commercial lending institution. No adjustment is necessary for modest differences between
36 commercial and seller-financed terms, but adjustments must be made in accordance with Rule 4 if
37 the differences are significant.

1 **Conditions of Sale**

2 When sale conditions are atypical, the result may be a higher or lower selling price than would
3 occur in a normal market transaction. For example, a family member may sell agricultural
4 property to another family member (typical in farming families) at a reduced price. Estate and
5 income tax situations may also cause the price to vary from that price paid by other active market
6 participants.

7 When atypical market conditions are detected in a comparable sales transaction, the sale should be
8 carefully correlated to the subject property. Since market-derived adjustments are more difficult
9 to make, the sale should not be used if possible. Frequently, a limited supply of recent, relevant
10 sales dictates that the transaction be used as part of the appraisal analysis. However, any
11 adjustments made should only be done after careful research into terms of the sale, buyer and
12 seller motivations, and possible effects on the price paid.

13 **Market Conditions**

14 Market conditions, or time, actually refer to changes in market conditions over the time period
15 between the date of sale and date of valuation. Market price levels may have remained static,
16 decreased, or increased. If changes in market conditions are evident, the reasons for this and the
17 amount of change need to be determined.

18 When sufficient appraisal data exist for a specific time period, trends can be identified and
19 measured by analysis of sales. Changes in other price level indicators over the specified time
20 period provides support for the available appraisal data and assist in refining conclusions drawn
21 from the data. Changes in price levels are usually expressed in percentage changes over time
22 periods which include monthly, quarterly, semi-annually, or annually.

23 By identifying and measuring changes in market conditions over time, comparable sales can be
24 adjusted to reflect the changes between the comparable sale dates and the date of the subject
25 valuation. Through this adjustment, the subject property and comparable sales are brought
26 together at a specific point in time, usually the date of the subject valuation, by establishing
27 current price equivalents for all comparable sales.

28 **Location**

29 When agricultural properties are situated within the same general region, location does not usually
30 have a major effect on value. However, location related factors may vary among properties and
31 cause location to have a significant effect on value.

32 A location adjacent to urban markets or transportation facilities may be locational features that
33 greatly increase marketability. Exceptionally good accessibility to markets or nearby
34 transportation facilities may enhance a property's adaptability and provide it with a competitive
35 marketing edge.

36 Likewise, location may be a factor in highest and best use. A favorable location for an
37 agricultural property may afford potential for either agricultural or residential/commercial uses. In

1 addition, the location of a specific property may be preferred over other locations as a desirable
2 place to live.

3 The availability of property for agricultural uses due to zoning ordinances or restrictions must be
4 considered. By virtue of different zoning regulations, a property may possess a greater or lesser
5 capacity for productive uses or investment purposes compared to otherwise similar properties.
6 When analyzing properties with different zoning ordinances, the possibilities of conditional uses or
7 variances, as well as the possibility of zoning changes in the general plan, must be considered.

8 **Physical Characteristics**

9 Physical characteristics account for the most extensive comparisons among agricultural properties
10 and produce the greatest number of differences to consider. There are two kinds of physical
11 characteristics, the first being land improvements which include:

- 12 • Size
- 13 • Shape
- 14 • Soil
- 15 • Water
- 16 • Topography

17 In the appraisal of an agricultural property, land improvements may be more significant than
18 building improvements, but all improvement differences between comparable sales and the subject
19 property should be considered and analyzed.

20 Building improvements usually require separate valuation and adjustments if their contribution is
21 significant to the value of the property. While adjustments for these improvements are made in
22 the comparative sales approach, the figures used may be derived by application of cost approach
23 techniques.

24 Agricultural properties generate income and comparisons and adjustments should be made on the
25 basis of their income characteristics. Anticipated potential gross income, anticipated operating
26 expenses, and anticipated potential net income (usually expressed in terms of dollars per acre) are
27 used for these adjustments. An analysis of these income characteristics affords indications of
28 anticipated net returns, which may provide a basis for comparison and adjustment in the
29 comparative sales approach.

30 There are several acceptable procedures that correlate comparable sales to the subject property
31 and provide adjustments for the differences either on a percentage or a lump sum basis.
32 Differences between specific physical characteristics of the subject property and comparable sales
33 may be expressed by using comparative analysis phrases such as "superior," "equal," or "inferior."

34 Regardless of the method used to report the differences, percentage or dollar adjustments need to
35 be made for each difference considered significant to the value relationship between the

1 properties. In applying the comparative sales approach, the starting point is the price paid for
 2 each comparable sale property. Each similarity and dissimilarity between the comparable sales
 3 and the subject property under appraisal is estimated regarding how much difference the factor
 4 makes as direct evidence of the market value of the subject property.

5 Once all the significant differences between the subject property and comparable properties have
 6 been determined, any variations influencing property value need to be measured. The validity of
 7 the comparative sales approach depends on an adequate number of comparable sales that are
 8 representative of the market and of their comparability to the subject property. In addition, it is
 9 extremely important to be able to quantify the influence of any differences.

10 When measuring the effect of a variable, all other factors remain constant. Ideally, two sales with
 11 only one difference between them could be located. The best example of this technique is the use
 12 of a sale and resale of a specific property. Assuming no change in the character of the property
 13 between sales, the only difference is the time period between sales. The difference in price, over
 14 time, of the two sales should provide an indication of market trends.

15 Lacking resales (typical when appraising agricultural properties), a search must be conducted for
 16 similar properties that sold at different times. With time as the only difference, a series of
 17 comparisons can identify price trends over the time period represented by the comparable sales.
 18 Once a conclusion has been reached regarding market trends, other significant differences
 19 between the comparable sales and subject can then be isolated and measured.

20 This technique of sales analysis is applied to a 640 acre row crop operation with Class I soils.
 21 Nine comparable sales have been identified and summarized below:

22

SALE	DATE OF SALE	PRICE	ACRES	PRICE PER ACRE	SOIL CLASS
1	6 months	\$1,600,000	400	\$4,000	Class I
2	6 months	\$2,252,250	585	\$3,850	Class II
3	4 months	\$2,310,875	665	\$3,475	Class III
4	3 months	\$2,516,250	610	\$4,125	Class I
5	2 months	\$1,567,500	475	\$3,300	Class III
6	5 months	\$2,315,400	680	\$3,405	Class III
7	4 months	\$1,831,200	480	\$3,815	Class II
8	4 months	\$1,937,000	520	\$3,725	Class II
9	2 months	\$2,106,000	540	\$3,900	Class I

23

1 Organizing the data in a spreadsheet or tabular form summarizes the differences that need to be
 2 addressed. In this specific case, three possible variables are evident—time, size, and soil
 3 classification.

SALE NUMBER	SALE DATE	UNIT PRICE	SOIL CLASS
1	6 months	\$4,000	Class I
4	3 months	\$4,125	Class I
9	2 months	\$3,900	Class I
2	6 months	\$3,850	Class II
7	4 months	\$3,815	Class II
8	4 months	\$3,725	Class II
3	4 months	\$3,475	Class III
5	2 months	\$3,300	Class III
6	5 months	\$3,405	Class III

4

5 Any influence of time is considered first, and an analysis of the above comparable sales does not
 6 reveal any paired sales. In addition, all sale dates are sufficiently recent as not to require
 7 consideration of any time adjustment.

8 The next step would be to observe the results for differences that might be a function of size.
 9 However, in the above example, there does not appear to be any discernible pattern regarding the
 10 size and sale price of the comparable sales.

11 The last significant variable to be considered in the above example is the soil classification ratings
 12 which account for all the differing physical characteristics of the subject and comparable sales. In
 13 this particular instance, the groupings reveal a fairly narrow range of values based on differences
 14 in soil classification. Although the above is just an example, it affirms the recognized fact that
 15 market participants will generally pay more for better quality soils with greater adaptability.

16 The subject property's Class I soil is the basis against which the sales are compared to measure the
 17 influence of the variation on value. Based on the above, it would appear that the subject falls
 18 within the value range from \$3,900 - \$4,125 per acre for Class I soils.

19 The final step in the comparative sales approach is to derive a single value indicator for the subject
 20 property. Although no complicated reconciliation is required in this example, this step always
 21 involves some reconciliation of single or multiple value indicators, if appropriate.

22 In the above example, the subject property and all comparable sales consist completely of row
 23 crop land. Frequently, properties will consist of land parcels with different soil ratings and
 24 capabilities, each of which contributes to the overall value of the property. As a result,
 25 comparable sales of similar properties may be scarce and the subject's individual land segments

1 may have to be valued separately. If the above 640 acre property had 75 percent Class I soils
 2 (480 acres) and 25 percent Class III soils (160 acres), the sales used for comparison will have
 3 different unit values. It would be appropriate to apply the indicated unit values (on a percentage
 4 basis) for Class I and Class III soils if the comparable sales had a similar composition or ratio of
 5 soil classification. When the differences in soil composition vary significantly, a separate value
 6 contribution must be determined for each component.

7 For example, a 640 acre economic unit with 160 acres of Class I soil, 240 acres of Class II soil,
 8 and 240 acres of Class III soil may be valued by comparing the different land parcels to similar
 9 comparable sale properties with equivalent soil capability. The summation of the parcels furnishes
 10 a value indicator for the unit as follows:

Comparative Sales Value Indicator on a Per Acre Basis

Class I Soil 160 Acres @ \$4,000	\$640,000
Class II Soil 240 Acres @ \$3,800	912,000
Class III Soil 240 Acres @ \$3,400	<u>816,000</u>
Total Land Value	<u>\$2,368,000</u>

11 The value indication in the above example is a summation of the estimated value contributions of
 12 separate parcels. This summation technique may not reflect the way multi-parcel properties are
 13 viewed by active market participants. A determination needs to be made whether the sum of the
 14 individually valued parcels reflects a reasonable value for the economic unit from the market's
 15 standpoint. The value indicator should generally be reliable if the highest and best use of the
 16 parcels is consistent with their contribution to the economic unit; if not, another approach to value
 17 should be considered.

18 Another approach is illustrated below.

19 A row crop parcel of 320 acres contains 200 acres of Class I soil, 50 acres of Class II soil, 50
 20 acres of Class III soil, and 20 acres of Class IV soil. A search of the marketplace presents five
 21 comparable sales for analysis.

- 22 1. Comparable Sale 1: 180 acres of Class I soil, 130 acres of Class II soil, 10 acres of Class
 23 III soil, and 60 acres Class IV. Estimated building value \$125,000. Sale price -
 24 \$1,380,000.
- 25 2. Comparable Sale 2: 180 acres of Class II soil. Sale price - \$540,000
- 26 3. Comparable Sale 3: 40 acres of Class I soil and 40 acres of Class III soil. Estimated
 27 building value, \$45,000. Sale price - \$305,000.
- 28 4. Comparable Sale 4: 80 acres of Class I soil and 80 acres of Class II soil. Estimated
 29 building value, \$150,000. Sale price - \$710,000.

1 5. Comparable Sale 5: 70 acres of Class II soil, 30 acres of Class III soil, and 60 acres of
2 Class IV soil. Estimated building value, \$55,000. Sale price, \$460,000.

3 The data could be arrayed in the following manner to indicate an overall subject value:

SALE	SOIL CLASS I	SOIL CLASS II	SOIL CLASS III	SOIL CLASS IV
1	\$4,000	\$3,000	\$2,500	\$2,000
2	---	\$3,000	---	---
3	\$4,000	---	\$2,500	---
4	\$4,000	\$3,000	---	---
5	---	\$3,000	\$2,500	\$2,000
Subject Property	\$4,000	\$3,000	\$2,500	\$2,000

4
5 Based upon values indicated by an analysis of the comparable sales, the value of the subject is
6 concluded to be:

200 Acres of Class I Soil @ \$4,000/Acre	\$800,000
50 Acres of Class II Soil @ \$3,000/Acre	150,000
50 Acres of Class III Soil @ \$2,500/Acre	125,000
20 Acres of Class IV Soil @ \$2,000/Acre	<u>40,000</u>
Total Value	<u>\$1,115,000</u>

7
8 **INCOME APPROACH**
9 The income approach to value is any method of converting an income stream into a value
10 estimate. It may be simple (rent or income multipliers, direct capitalization) or refined (residual
11 techniques, discounted cash flow analysis). All of these methods can be referred to as
12 "capitalization techniques" because they convert a future income stream into a capital sum
13 (present worth).

14 The income approach to value is a sensitive appraisal tool that requires careful application
15 because small variations in its several elements (rates, length of income stream, risk factor) will be
16 mathematically "levered" into wide ranges in capitalized earning ability.

17 The use of the income approach depends upon the validity of the following conditions:

- 18 • Value is a function of income and the property is purchased for the income it produces

- 1 • Value depends upon the quality and quantity of the income stream and the investor
2 demands a return of and on the investment
- 3 • Future income is less valuable than present income, and the value of the property is the sum
4 of the present worth of its anticipated future net benefits

5 If any of these assumptions do not correspond to the reality of the property, the income approach
6 to value should not be given great weight as an indicator of the property's current market value.

7 **Value is a Function of Income**

8 For the income approach to be appropriate, an agricultural property must be of a type that is
9 commonly bought and sold on the basis of its income stream, and the benefits that flow from the
10 property must be expressed in terms of money.

11 Whenever possible, all amenities (nonincome-producing aspects of ownership) should be
12 converted into an income equivalent. In addition, a capitalization rate derived from market data
13 and based solely on the money income produced by the property must be developed.

14 Care must be taken to impute income only to the real property elements of a property being
15 appraised. For instance, one would not value an agricultural roadside store and land by
16 considering the gross income from operating the retail store business itself. Business earnings
17 must be segregated from property earnings.

18 **Value Depends Upon the Quality and Quantity of the Income Stream**

19 The prudent agricultural investor estimates the size, shape, duration, and quality of a property's
20 income stream before purchasing it. Land (other than mineral rights) theoretically generates
21 income forever, but improvements gradually wear out and cease to generate economic amounts of
22 income. It is essential to project both the length and the shape of the anticipated future income
23 stream generated by an income-producing property.

24 The "quality" of an income stream refers to its certainty, how likely the investor will receive
25 income in the future. The greater the uncertainty of the income, the higher the rate at which the
26 income stream should be mathematically converted into a lump sum.

27 Investors demand both a return of their investment and a return on it. These expectations are
28 accounted for as "amortization" or "recapture" and "yield." The cash portion of an income stream
29 identified as "yield" contains elements for time (waiting to receive the income), liquidity
30 (converting real property to cash), management, and risk (the probability of receiving the income
31 forecast).

32 **Future Income is Less Valuable Than Present Income**

33 The concept of value under the income approach is that the value of a property is the sum of the
34 present worth of its anticipated future net benefits. The sum of the present worth of the benefits
35 is always less than the undiscounted sum of these future net benefits. Capitalization is the process
36 of discounting these future benefits to find present worth. In other words, the value of the

1 property today equals the investment required, when compounded periodically at a given rate, to
2 generate the same cash flow as the property.

3 The process of discounting future income to make it equivalent to the present value has three
4 components:

- 5 • The amount of income
- 6 • The discount rate
- 7 • The time over which the income is to be realized

8 If the value of the property being appraised is "V," its income is "I," and the capitalization rate is
9 "R," their relationship can be expressed as:

$$V = \frac{I}{R}$$

10 If the capitalization rate including recapture is derived from a table of annuity factors, and the
11 factor "F" is a ratio between value and annual net income, the formula would be modified to:

$$12 \quad V = I \times F$$

13 The precise method of capitalization should be determined by the shape of the income stream.
14 The income stream must be analyzed before proceeding to the mechanics of capitalization.

15 **Applying the Income Approach for Property Tax Purposes - Rule 8**

16 California Code of Regulations, Property Tax Rule 8, prescribes the conditions under which the
17 income approach to value may be applied. Subdivision (a) specifies that:

18 The income approach to value is used in conjunction with other approaches when
19 the property under appraisal is typically purchased in anticipation of a money
20 income and either has an established income stream or can be attributed a real or
21 hypothetical income stream by comparison with other properties. It is the
22 preferred approach for the appraisal of land when reliable sales data for
23 comparable properties are not available. It is the preferred approach for the
24 appraisal of improved real properties and personal properties when reliable sales
25 data are not available and the cost approaches are unreliable because the
26 reproducible property has suffered considerable physical depreciation, functional
27 obsolescence or economic obsolescence, is a substantial over- or
28 underimprovement, is misplaced, or is subject to legal restrictions on income that
29 are unrelated to cost.

1 Subdivision (b) states that in using the income approach, "an appraiser values an income property
2 by computing the present worth of a future income stream." A complete description and practical
3 application of such computation is set forth in the rule.

4 Subdivision (c) establishes that the amount to be capitalized is the net return which a reasonably
5 well informed owner and reasonably well informed buyer may anticipate on the valuation date that
6 the taxable property existing on that date will yield, considering prudent management and subject
7 to any legally enforceable restrictions as such persons may foresee as of that date. As stated
8 therein:

9 . . . Net return, in this context, is the difference between gross return and gross
10 outgo. Gross return means any money or money's worth which the property will
11 yield over and above vacancy and collection losses, including ordinary income,
12 return of capital, and the total proceeds from sales of all or part of the property.
13 Gross outgo means any outlay of money or money's worth, including current
14 expenses and capital expenditures (or annual allowances therefor) required to
15 develop and maintain the estimated income. Gross outgo does not include
16 amortization, depreciation, or depletion charges, debt retirement, interest on funds
17 invested in the property, or rents and royalties payable by the assessee for use of
18 the property. Property taxes, corporation net income taxes, and corporation
19 franchise taxes measured by net income are also excluded from gross outgo.

20 Based upon the foregoing, while severance and other production taxes and/or permit fees are
21 deductible, property taxes and income taxes are not legitimate deductions from gross income, nor
22 are rents and royalties payable by the assessee for the use of the property.

23 Subdivision (d) states that:

24 In valuing property encumbered by a lease, the net income to be capitalized is the
25 amount the property would yield were it not so encumbered, whether this amount
26 exceeds or falls short of the contract rent and whether the lessor or the lessee has
27 agreed to pay the property tax.

28 Thus, the estimate of economic rent for income-producing property must be made without regard
29 to actual lease arrangements that may exist, including rent levels and property tax considerations,
30 since the objective is market value of the "unencumbered and unrestricted fee simple interest."

31 Subdivision (e) recommends using income from property rental rather than business operation,
32 since income derived from operations is more likely to be influenced by managerial skills and may
33 arise in part from nontaxable property or other sources. If operating income must be considered,
34 sufficient income must be excluded to provide a return on working capital and other nontaxable
35 operating assets and to compensate unpaid or underpaid management.

1 Subdivision (f) requires the inclusion of a property tax component, equal to the estimated future
2 tax rate for the area times the assessment ratio, in the capitalization rate for all property tax
3 appraisals.

4 Subdivision (g) provides two means of developing a capitalization rate for property tax appraisals:

- 5 • By comparing the net incomes that could reasonably have been anticipated from recently
6 sold comparable properties with their sales prices, adjusted if necessary to cash equivalents
7 (the market-derived rate)
- 8 • By deriving a weighted average of the capitalization rates for debt and for equity capital
9 appropriate to the California money markets (the band-of-investment method) and adding
10 increments for expenses that are excluded from outgo because they are based on the value
11 that is being sought or the income that is being capitalized

12 In the former, the ratio of net income to adjusted selling prices of comparable sales is determined
13 and a range of yields or overall rates developed. Subdivision (g)(1) states that this method is
14 preferred when sales prices and incomes are available. In the latter, a weighted average of current
15 rates for debt and equity capital is developed (subject to the inclusion of a property tax
16 component).

17 Finally, subdivision (h) provides that income may be capitalized by the use of gross income, gross
18 rent, or gross production multipliers (derived by comparing sales prices of closely comparable
19 properties with their gross income, gross rent, or gross production). Subdivision (i) excludes
20 open-space lands and taxable possessory interests from certain provisions of Rule 8.

21 In properties used for agricultural production, the income approach is significant in the estimation
22 of value and primary attention is focused on earnings from the land and the annual cash flow from
23 agricultural production.

24 The basic steps in the income approach are as follows:

- 25 • Estimation of typical rental data, crop rotations, yields, and average commodity prices
- 26 • Estimation of potential gross income for the subject property based on either owner-
27 operator income or rental or lease basis
- 28 • Estimation of expenses and deduction from potential gross income to obtain net operating
29 income (net income before recapture and taxes)
- 30 • Selection of the appropriate capitalization method
- 31 • Development of the appropriate capitalization rate or factor
- 32 • Estimation of the subject property value and reconciliation of value indicators

33 The appraisal of agricultural properties presents two mechanisms for developing an income and
34 expense statement: owner-operator and landlord/tenant financial information. In addition,

1 landlord/tenant information falls within two separate categories: cash-rental lease agreements and
2 share-crop agreements.

3 ESTIMATION OF POTENTIAL GROSS INCOME

4 CASH OR RENTAL LEASE AGREEMENTS

5 A cash or rental lease agreement specifies the terms and conditions under which a landlord will
6 grant the use of the property to a tenant. The most important considerations for such an
7 agreement are the cash rent paid to the owner and payment terms, but additional factors are also
8 important. Additional factors include restrictions on property uses, duration of the rental lease
9 agreement, cancellation or escape clauses, required cultural practices, landlord payments for
10 specified production expenses, escalation clauses (percentage leases) when production exceeds
11 specified levels, adjustments if normal water supplies are not available, and designation of
12 individuals responsible for specific expenses associated with the property. Cash rents vary
13 annually and provide a barometer of the agricultural economy. Rents or leases which have a
14 specific contract rent are typically negotiated for a one-year period. Although a specific parcel of
15 land may be rented or leased for a number of years, annual renegotiation of the agreement is
16 typical.

17 SHARE CROP AGREEMENTS

18 Orchards, vineyards, and certain crops such as barley and wheat are usually leased under share-
19 crop agreements. Under the terms and conditions of such an agreement, the landlord receives a
20 specific share of the crops produced on an annual basis. The landlord's share varies by region and
21 type of commodity. Additional factors for consideration, which pertain to rental or lease
22 agreements, also pertain to share-crop agreements.

23 The landlord's participation in a share-crop agreement exposes the landlord to more potential
24 benefits—and potential risks—than cash rental or lease agreements. This point needs to be
25 considered when estimating economic rent and extracting yield or overall capitalization rates from
26 market transactions. If income estimates are based on share-crop agreements, the yield
27 component for the capitalization rate applied to that income estimate should be derived from
28 share-crop agreements. Conversely, income projections based on cash rental or lease agreements
29 should be capitalized with a yield component derived from rental or lease agreements.

30 OWNER-OPERATOR INCOME

31 Owner-operator income refers to the total gross income earned by a farm or ranch operated by
32 the owner. Owner-operator income may include amounts attributable to superior management
33 that must be deducted, or it may be missing amounts attributable to noncash amenities that must
34 be added. Such additions and deletions are difficult to measure. Moreover, every expenditure
35 must be analyzed to make certain that long-term capital improvement costs are not deducted with
36 ordinary operating expenses.

1 When refining owner-operator income into net income, many expenses must be considered.
 2 Expenses may include costs for tillage, seed, fertilizer, herbicides, pesticides, utilities, fuels, water,
 3 salaries (including amount withheld for taxes, insurance, social security, etc.), and a return on and
 4 of investment, property taxes, and/or license fees, etc., on such personal property as trucks,
 5 tractors, and farm machinery. These expenses are in addition to normal expenses that include
 6 management, maintenance, and insurance.

7 While the majority of owner-operators is a potential source for understanding the economics of
 8 the operation, the use of an owner-operator income and expense statement is the most difficult
 9 method for deriving net income. Owners and operators are encouraged to meet with the county
 10 assessor periodically to present and discuss information relative to income, expenses, risks, and
 11 other relevant information.

12 The better method, when such information is available, is to use rental information taken from
 13 current, typical leasing agreements for similar properties.

14 **ANNUAL INCOME ESTIMATES**

15 An appraiser should not consider the income from a single year's operation as being typical for all
 16 years. Instead, the appraiser should study the cropping patterns, yields realized, commodity price
 17 levels, and make the income projections based on actual cash or share rental rates in effect during
 18 the past three to five years.¹² The appraiser should be familiar with trends expected in the future
 19 and base the estimate of economic annual income on what the typical owner can reasonably
 20 anticipate.

21 The preferred method for estimating annual economic income is through the analysis of cash
 22 rentals or leases if they are available in sufficient numbers. A second method, applicable for areas
 23 where share-crop arrangements are prevalent, is to utilize the owner's share of the tenant's crop
 24 production multiplied by the projected commodity price. Care should be taken to recognize that
 25 prices generally move inversely with production and therefore estimates as to projected
 26 commodity price should not be made separately from estimates as to the owner's share of the
 27 tenant's production. Generally, the most weight or reliance should be placed on recent data.
 28 Additional discussion on share rental analysis is provided in Part II, Chapter 2, Share Rental
 29 Analysis.

30 **ESTIMATION OF EXPENSES**

31 To obtain the net income for an agricultural property, all expenses necessary to produce and
 32 maintain the income stream and provide for management are deducted from the potential gross
 33 income. Care must be exercised in the analysis of the expense statement to verify that all charges

¹² For alternate bearing crops, such as pistachios and olives, a four or six year commodity price analysis should be considered; prices normally fluctuate greatly between light and heavy production years. This will give equal consideration to high and low prices.

1 included are directly related to the operation and management of the agricultural property and do
2 not include any improper expenses.

3 The expenses deducted from potential gross income should be compatible with the type of income
4 stream such as cash rentals, share-crop rentals, or owner-operator expenses. As stated earlier, a
5 landlord/tenant agreement is favored as the basis for the income and expense statement in
6 agricultural appraising.

7 The major expense items which should be part of any expense analysis include:

- 8 • Cultural and growing costs
- 9 • Equipment expenses
- 10 • Maintenance expenses
- 11 • Labor expenses
- 12 • Water and irrigation costs
- 13 • Management fees
- 14 • Insurance

15 Items which are not allowed and should not be included as part of an expense analysis include:

- 16 • Depreciation
- 17 • Mortgage expenses including amortization
- 18 • Capitalized expenditures
- 19 • Extraordinary expenses on a nonrecurring basis
- 20 • Interest expense on production loans
- 21 • Additional principle repaid
- 22 • Income taxes either personal or corporate
- 23 • Property taxes (except when extracting a capitalization rate)

24 **CULTURAL AND GROWING COSTS**

25 Growing costs vary tremendously depending on the crop and cultural practices employed. Actual
26 expense histories provide excellent information for estimating these costs, and additional
27 information can be obtained from agricultural extension services that publish articles relating to
28 the growing costs of almost any commodity.

29 **MANAGEMENT FEES**

30 Management fees pertain to those expenses typically incurred by owners for the management of
31 their property and include the monetary outlay for supervising the agricultural operation and
32 providing periodic inspections of the property; accounting, banking, and legal fees; and the cost of

1 negotiating and preparing the leases. Management fees are generally charged as a percentage of
2 the gross income (2 to 5 percent) and can be reflected on a percentage basis.

3 **WATER AND IRRIGATION COSTS**

4 Water and irrigation costs are incurred to cover the annual operation, maintenance charges, and
5 debt repayment obligations for an irrigation district or water company. The charges can be based
6 on per-acre foot of water delivered, flat per-acre cost, or on a per-agricultural unit basis. Utility
7 pumping costs for well water must be considered and, in some cases, are prohibitive due to the
8 excessive energy costs to pump from deep wells.

9 **MAINTENANCE**

10 Maintenance expenses will include repair and replacement of all property improvements that
11 contribute to the income including buildings, crop storage facilities, equipment storage facilities,
12 irrigation and drainage system equipment including pumps and sprinkler pipe, bridges, fences,
13 trellises, and corrals. It must be determined during the course of the appraisal if maintenance
14 levels are sufficient to adequately maintain all the improvements and, if not, additional charges for
15 repair and replacement items should be incorporated into the expense statement.

16 **LABOR EXPENSES**

17 This expense category is difficult to calculate due to the seasonal nature of productive agriculture.
18 If adequate information is not available, an alternative is to obtain custom farm rates for the
19 various cultural practices including equipment, machinery, materials, and labor costs.

20 **INSURANCE EXPENSE**

21 Insurance expense pertains to any insurance category required to develop and sustain the income
22 stream for an agricultural property. It may include prepaid crop insurance (two to three years in
23 advance), vehicle and equipment insurance, and all insurance designed to cover personal injury.
24 In those instances where insurance is prepaid, the expense should be prorated on an annual basis.

25 **PROPERTY TAXES**

26 Property taxes are not appropriately deducted as an expense since this would presume that the
27 value being sought is already known. Property taxes expense are appropriately handled by the
28 inclusion of a tax component in the overall capitalization rate. However, property taxes should be
29 deducted from gross income estimates when determining net income for the purpose of deriving
30 capitalization rates.

31 **MISCELLANEOUS EXPENSES**

32 Extraordinary expenses (such as land improvement) are not considered deductible from the
33 expense statement unless they are incurred on a periodic and systematic basis. Typically,
34 permanent land improvement costs of this type contribute to increased land value and are
35 expensed as capital investments or improvements. Special charges (water district special
36 assessments) are generally considered appropriate expenses. However, special assessments based

1 on a percentage of market value should not be considered as deductible expenses and should be
2 included as part of the property tax component in the capitalization rate.

3 **CAPITALIZATION RATES**

4 Before the capitalization process can be completed, a determination must be made regarding the
5 appropriate capitalization rate. Capitalization rates may include components for yield, recapture,
6 and property taxes. Overall rates may be extracted from market sales by dividing the net
7 operating incomes from sold properties by the total sales prices or by weighting debt and equity
8 capital (band-of-investment method).

9 Generally, rates for agricultural properties are lower than rates for commercial/industrial
10 properties due to noncash amenities and deferred income from property appreciation. While
11 potential noncash income/amenities may cause selling prices to increase, measurable net income
12 may remain comparatively stable, resulting in lower rates of return than expected for properties
13 purchased for their current income-producing capability.

14 Any capitalization rate must be applied on the same basis from which it was extracted. To
15 illustrate, a rate derived from a sale with a constant level income stream should be applied in the
16 capitalization of a similar income stream. Similarly, a capitalization rate extracted from a sale
17 with a straight-line declining income stream should be applied in a like manner.

18 The following examples demonstrate methods and techniques used to extract capitalization rates
19 from sales with constant level perpetual incomes, straight-line declining terminal incomes, and
20 level terminal incomes.

21 **EXAMPLE I**

22 This example illustrates the extraction of an overall rate from irrigated crop land sales. The
23 income stream is expected to remain level and perpetual.

	SALE 1	SALE 2	SALE 3	SALE 4
	100 Acres	80 Acres	160 Acres	140 Acres
Price	\$350,000	\$280,240,00	\$450,448,00	\$475,434,00
Sales Price Per Acre	\$3,500	\$3,000	\$2,800	\$3,100
Gross Rent Per Acre	\$210	\$200	\$175	\$205
Anticipated Expenses (Including Replacement and Property Taxes)	\$65	\$62	\$58	\$65
Net Income	\$145	\$138	\$117	\$140
Overall Rate (Net Income ÷ Sales Price Per Acre)	0.041	0.046	0.042	0.045

1

2 Property taxes should not be directly deducted as an expense item when valuing property since
 3 they result from the property value being sought. The tax expense is properly handled by adding a
 4 tax component to the capitalization rate. Taxes should be deducted, however, from gross income
 5 when finding net income for the purpose of deriving a capitalization rate.

6 **EXAMPLE II**

7 An 80 acre orchard improved with walnut trees with a 20 year remaining economic life recently
 8 sold for \$640,000. Vacant land sales indicate that \$240,000 is a reasonable land value for the
 9 subject. Potential gross income is \$110,000 per year; anticipated annual expenses including
 10 cultural practices, management, maintenance, insurance, harvesting, and property taxes are
 11 \$46,000; and net annual income before recapture is \$64,000.

12 A rate can be developed for a straight-line declining income premise for trees as follows:

Net Income Before Tree Recapture	\$64,000
Tree Recapture	
\$400,000 Residual Tree Value ÷ 20 Years	<u>20,000</u>
Net Income	\$44,000
Indicated Yield Rate	
\$44,000 Net Income ÷ \$640,000 Sale Price	0.0687

13

14 Using the same example, assume that a constant terminal income stream is more appropriate for
 15 recapture of the trees. Under these assumptions, a yield rate can be extracted through the use of a
 16 financial calculator or through application of a trial and error method as follows:

1

	TRIAL YIELD RATES		
	Say .085	Say .090	Say .095
Net Income Before Tree Recapture	\$64,000	\$64,000	\$64,000
Land Charge (\$240,000 x Trial Rates)	\$20,400	\$21,600	\$22,800
Tree Income	\$43,600	\$42,400	\$41,200
PW I/P Factor (20 Years @ Trial Rates)	9.463	9.128	8.812
Indicated Tree Value	\$412,586	\$387,027	\$363,054
Indicated Total (Trees and Land)	\$652,586	\$627,027	\$603,054

2

3 The sales price of \$640,000 falls between the rates of .085 and .090. An indicated yield rate of
4 0.0875 might be appropriate under the circumstances.

5 The above examples demonstrate that two different methods will result in substantially different
6 rates. This variation occurs because of the different shapes of the projected income streams.
7 These examples demonstrate the need to accurately project potential net income and the necessity
8 to apply yield rates with the premise from which they were derived.

9

CAPITALIZATION TECHNIQUES

10 The components of capitalization include the income to be capitalized, the capitalization rate or
11 factor at which it is to be discounted, and the time period(s) over which the income is to be
12 realized. The result is the present value of the expected income. The capitalization rate or factor
13 must provide for both the return of the portion of the investment that declines in value (the
14 recapture) and for the return on the investment (the yield). The means of investment recapture
15 selected should reflect the expectations of buyers and sellers of agricultural properties. In
16 addition to providing for the return on and return of the investment, the capitalization rate
17 includes a component for property tax purposes.

18 DIRECT CAPITALIZATION

19 Direct capitalization is a method which converts a single year's income estimate into a value
20 indication in one step, either by dividing the income estimate by a capitalization rate or multiplying
21 it by an income factor. In direct capitalization no allocation is made between the return on and
22 the return of the investment. This method does not explicitly specify investor assumptions
23 regarding the return of and the return on the investment, the duration or income pattern, or
24 changes in the value of the investment. Rather, these assumptions are implicit in the rates or
25 income factors being used in direct capitalization. Income multiplier analysis is a variation of

1 direct capitalization. Direct capitalization has wide applicability to agricultural properties when
2 land rental data are available.

3 Direct capitalization of the total property net income has limitations. Since the overall rate does
4 not specify a return of the investment, the subject and comparable sales properties must be very
5 similar in many respects: ratio of land to improvements, remaining economic life, and physical
6 characteristics.

7 **YIELD CAPITALIZATION**

8 Yield capitalization is a method which converts a series of future benefits into an estimate of
9 present value by discounting each future benefit at a selected yield rate. In yield capitalization, the
10 appraiser (1) estimates a holding period for the investment; (2) forecasts the expected future
11 income during the holding period; (3) estimates the reversionary value; (4) selects a yield or
12 discount rate; and (5) converts future benefits into an estimate of present value by discounting
13 each periodic income over the holding period. The periodic income streams may be discounted to
14 present value using financial or annuity tables that contain annuity factors.

15 Discounted cash flow (DCF) analysis is a widely used form of yield capitalization. DCF analysis
16 is defined as the analysis of cash flow projections for each period of time that the property
17 produces income in order to compute its present value assuming a certain rate of return, or to
18 compute the internal rate of return indicated by periodic cash flows.

19 A series of payments made at equal intervals is known as an **annuity**. The present value of an
20 annuity is the sum of the several separate periodic incomes, discounted to their respective present
21 worth.

22 The proper capitalization formula to use is a function of the shape of the income stream, which is
23 based on the perceptions of active market participants. The income stream must be analyzed
24 before proceeding to the mechanics of capitalization. While the methods of capitalization may
25 differ because of variations in the nature of the income stream, or variations in the composition of
26 the capitalization rate, the basic principles of capitalization remain constant.

27 **RESIDUAL TECHNIQUES**

28 Residual techniques of income capitalization allow an appraiser to capitalize the income allocated
29 to an investment component of unknown value once all investment components of known value
30 have been satisfied. Residual techniques can be applied to the physical components of a property
31 (land and improvements) or to the financial components (debt and equity).

32 When using residual techniques, the appraiser (1) applies an appropriate capitalization rate
33 ("appropriate" in terms of the risk and return expectations of active market participants) to the
34 value of the known component to determine the amount of income needed to support the
35 investment in that component; (2) deducts this amount from the total estimated market, or
36 economic, net income before recapture and property taxes (NIBR&T) of the subject property to

1 derive the residual income available to the unknown component; (3) capitalizes the residual
2 income into an estimate of value of the unknown component using an appropriate capitalization
3 rate for that component; and (4) obtains a value indication for the total property by summing the
4 value of the known component with the estimated value of the unknown component.

5 **BUILDING RESIDUAL TECHNIQUE**

6 The building residual technique is used when the value of the land is known but the value of
7 improvements is unknown. After processing the estimated economic income of the subject
8 property to the level of NIBR&T, the income imputable to the land (the land value multiplied by
9 the land capitalization rate) is deducted. The residual income is attributable to the building (or
10 agricultural) and may be converted to an estimate of improvement value by capitalizing it using a
11 building capitalization rate.

12 The capitalization rate for the land, which assumes a constant perpetual income stream, is a
13 combination of a yield rate and an effective tax rate. The capitalization rate for the building is a
14 combination of a yield rate, a recapture rate for the return of the investment in the wasting
15 improvement, and the effective property tax rate.

16 The building residual technique can be used with agricultural properties because land values are
17 easier to determine than improvement values. The technique is best suited for valuing orchards
18 and vineyards.

19 **LAND RESIDUAL TECHNIQUE**

20 The land residual technique is used when the value of the building (or agricultural improvements)
21 is known but the value of the land is unknown. The income attributable to the buildings (the
22 building value multiplied by the building capitalization rate) is deducted from the estimated
23 economic NIBR&T of the subject property. The residual income is attributable to the land and
24 may be converted into an estimate of land value using a land capitalization rate.

25 The land residual technique allows the appraiser to estimate land values when comparable sales
26 data are not available. The technique can also be used to estimate the highest and best use of both
27 vacant and improved sites by presuming potential highest and best uses and comparing the
28 resulting estimates of land value. The land residual technique processes income to a net figure
29 imputable to land and is not readily adaptable to agricultural properties. Generally, with
30 agricultural properties the ratio of improvement to land value is relatively minor, and it is difficult
31 to estimate the income and improvement value.

32 **PROPERTY REVERSION**

33 The property reversion technique consists of capitalizing the total net economic income for the
34 expected life of the income stream and combining that with the present worth of any reversionary
35 land value. This technique has little application for agricultural properties since it does not
36 provide a land value allocation adequate for the total property valuation.

INCOME MULTIPLIERS

Another method of comparison is to develop income multipliers. Income-producing properties may be compared on the basis of multiples of their gross or net incomes. Income multipliers, whether calculated at the level of gross or net operating income, are properly considered part of the income approach. Income multipliers are factors rather than rates. The basic formula for a gross income multiplier (GIM) is:

$$\text{GIM} = \frac{V}{I}$$

Where:

V = Cash equivalent selling price of a comparable property

I = Anticipated maximum earning capacity of sold property

(Note: This may differ from its actual income)

When appraising agricultural properties, appraisers commonly speak of production multipliers such as price per ton, box, bale, sack, or cwt. To apply this useful tool to a property, the appraiser determines the multipliers from sold properties that are similar to the subject, selects a multiplier, and applies it to the economic income of the subject property. For example, if the subjecta comparable property contained 200 acres of row crop land, sold for \$800,000, and its potential gross income was \$150,000 at the time of sale, the gross income multiplier would be $\$800,000 \div \$150,000$, or 5.33. This factor could then be applied to the potential gross income of the subject property to produce an indicator of market value.

Using the same sales data, the relationship of sales price to net income could be determined. For example, the 200 acres of row crop land sold for \$4,000 per acre and its net income was \$375 per acre at the time of the sale. By dividing the price per acre by the net income per acre, $\$4,000 \div \375 , a net income multiplier of 10.66 is developed.

Income multipliers must be derived from sales of very similar properties. "Similar" is defined as being alike in terms of use, physical characteristics, and other relevant characteristics. If a net income multiplier is sought, properties (subject and comparable sales) with similar gross to net income and operating expense ratios must be used in the analysis. The unit of comparison selected must be consistently applied to the subject and all comparable sale properties in each analysis.

RECONCILIATION AND THE FINAL VALUE ESTIMATE

Independent processing of available data will lead to separate indicators of value and, therefore, the next step is to reconcile the several indicators into a final estimate of value. In the reconciliation process, consideration should be given to any factors influencing value that are either not reflected or only partially reflected in the indicators. The greatest weight should be

1 given to that approach or combination of approaches that best measures the type of benefits the
2 subject property yields.

3 For example, if improvements are old, a cost estimate should be reviewed for the appropriateness
4 of the depreciation estimate. If the sales comparison approach is used, a check should be made to
5 determine whether the indicator relies heavily upon one sale or whether numerous subjective
6 adjustments ("superior" or "inferior") were necessary to make the properties "comparable." In
7 reviewing the income approach, the appraiser should re-examine the estimates of economic rent,
8 economic life, expenses, and the capitalization rate. Alternative estimates should be considered,
9 and the appraiser should consider whether estimates are consistently optimistic or pessimistic.

10 The final value estimate is the final step in the appraisal process. Although containing an element
11 of judgment, the conclusion must be based upon indicators derived from objective data, plus
12 general overall value influences. Greatest reliance should be placed on that indicator which best
13 measures the type of benefits the subject property yields. For agricultural properties, these
14 benefits may be in the form of amenities, services, or income.

1 **CHAPTER 4: VALUATION OF NONLIVING IMPROVEMENTS**

2 Agricultural properties are ordinarily sold and purchased as operating units that include both land
3 and improvements. The unit concept is followed when agricultural properties are valued for
4 property tax purposes and once the total unit value is calculated, an allocation must be made
5 between land and improvement values for the property tax roll. The ensuing discussion briefly
6 describes agricultural improvements and appropriate appraisal methods for their valuation.

7 For agricultural properties with building improvements which contribute to production but do not
8 have identifiable income streams, a unit cost method for determining building improvement values
9 is normally used. The unit cost method is a relatively simple approach to cost estimation and is
10 widely used for agricultural purposes. Building costs are estimated based on gross building
11 dimensions and compared to established cost factors for similar buildings. The cost factors are
12 expressed as a unit of comparison, typically cost per square foot, and include such considerations
13 as: size, shape, quality, height, finish, and other amenities. Assessors' Handbook Section 531,
14 *Residential Building Costs*, and Assessors' Handbook Section 534, *Rural Building Costs*, contain
15 cost data on improvements.

16 Many agricultural properties reserve one to five acres of land (referred to as a farmstead) for a
17 residence and additional improvements used in the farming operation. Normally, due to
18 insufficient comparable sales data for the comparative sales approach and the inapplicability of the
19 income approach, these improvements are valued by the cost approach. The cost approach is
20 appropriate in estimating the market value of agricultural properties on which structural
21 improvements constitute a major portion of value.

22 Replacement cost new less depreciation (RCNLD) generally provides a reliable indicator of
23 improvement value if the effects of accrued depreciation have been accurately measured.
24 Agricultural properties are frequently improved with numerous structures, and in many situations
25 the structures are no longer used or represent an overimprovement for the subject property. To
26 illustrate, one or possibly two general purpose barns might be appropriate for a moderate sized
27 row crop or vineyard operation; whereas, four or five structures would probably constitute an
28 overimprovement. In addition, many structures suffer from functional obsolescence due to
29 changes in design and/or technology and can no longer perform the functions for which they were
30 designed. The aggregate effects of accrued depreciation and obsolescence must be considered
31 and accounted for in a total property analysis.

32 **RESIDENCES AND RURAL HOMESITES**

33 Values are determined for the residential portion of an agricultural property unit by application of
34 the cost or summation approach. The basic cost approach steps are as follows:

- 35 • Estimation of the land value as though vacant and available for its highest and best use

- 1 • Estimation of the replacement or reproduction cost of the residential structure as of the
2 appraisal date
- 3 • Estimation of the total accrued depreciation from physical deterioration, functional
4 obsolescence, and external obsolescence
- 5 • Deduction of total accrued depreciation from the replacement or reproduction cost of the
6 structure to determine its value contribution
- 7 • Addition of the land and improvement values to obtain an indication of the total value for
8 the subject

9 If possible, the value indicator from the cost approach should be reviewed against other homesite
10 sales to confirm that it is consistent with the marketplace.

11 Measuring the value contribution of the homesite can be subjective; however, specific guidelines
12 provide reasonable value ranges. Generally, the homesite should fall between the price per-acre
13 of adjacent agricultural land and the value of comparable sized parcels for residential
14 development. If local zoning ordinances prohibit the agricultural land from being parceled into
15 sites as small as the subject homesite, then smaller parcel sales may not provide valid indicators.
16 Regardless, the appraisal objective goal is to assign a site value equal to the homesite contribution
17 to the entire unit.

18 The above described valuation method does not apply to homesites located on agricultural land
19 subject to the California Land Conservation Act (CLCA). See Part II of this manualhandbook for
20 CLCA homesite valuation procedures.

21 **FARM BUILDINGS AND MISCELLANEOUS STRUCTURES**IMPROVEMENTS

22 **Barns** of many different types and materials (general purpose, hay storage, feed, livestock,
23 diarydairy) will be encountered. They fall into three categories:

- 24 • Class 1—structures of fair quality
- 25 • Class 2—structures of average quality
- 26 • Class 3—structures of good quality

27 Barns are frequently dissimilar in size, shape, design, and quality but provide two essential
28 services—storage and shelter. Many barns are old, suffer from extensive accrued depreciation,
29 and no longer perform the function for which they were built. Their contribution to the total
30 agricultural unit must be determined during the appraisal process.

31 If the use of a barn is essential for the production of crops or livestock, the barn contributes
32 directly to the income earned by the farm unit, and its value may be reflected in the capitalized
33 earning ability. However, barns used for nonfarm purposes do not contribute directly to the unit
34 income and should be valued by the cost or comparative sales approach.

1 **Shops** are similar to barns but are generally employed for the maintenance and storage of farm
2 equipment; shops usually offer more amenities. Construction costs tend to run approximately 10
3 to 25 percent higher than barns. Shops are also grouped as Class 1, Class 2, or Class 3,
4 depending on the quality.

5 **Sheds** are usually smaller than barns and shops, have a simple basic design, possess inferior utility,
6 and are constructed from all types of materials. Sheds are also grouped into Class 1, Class 2, and
7 Class 3 categories with basic construction costs approximately 50 percent lower than barns and
8 shops. Generally, sheds are not as well maintained as barns and may suffer from significant
9 amounts of physical deterioration. A replacement cost approach may be the only reasonable
10 method of appraisal.

11 **Corrals** do not generally add a great deal of value to an agricultural operation except in the case
12 of larger ~~cattle~~-livestock operations, dairies, or horse ranches. The appropriate market
13 contribution of corrals must be determined during the appraisal process. If it can be established
14 through the comparative sales approach, or income approach, that corrals contribute to value, that
15 amount should be included in the total property valuation. However, in many cases, the cost
16 approach is the only viable option for the valuation of corrals.

17 **Fences** are similar to corrals and present the same appraisal problems. Would a potential
18 purchaser of a livestock or dairy operation attribute value to the fences and, if so, what would be
19 the appropriate amount? The market contribution may be significant in some cases and
20 nonexistent in others. The preferred method of valuation would be the comparative sales or
21 income approaches; however, the cost approach may be the only viable alternative in many
22 situations.

23 **Liquefied Petroleum Gas Tanks** are classified as improvements pursuant to rule 124. Rule 153,
24 regulating the assessment and valuation of liquefied petroleum gas tanks, was adopted to promote
25 assessment uniformity of liquefied petroleum gas tanks (commonly referred to as *propane tanks*).
26 Rule 153 defines *liquefied petroleum gas tanks (LPG tanks)*, includes guidelines to determine if
27 the property is leased or rented, identifies the ultimate consumer of the tanks, and describes
28 valuation procedures.

29 **Farm machinery and equipment** designed to function either as permanent fixtures¹³ or as
30 portable personal property may be encountered. Specific guidelines concerning appraisal
31 responsibility (appraisers or auditor appraisers) as well as pertinent valuation techniques for these
32 types of property are outlined in other sections of the Assessors' Handbook.

33 Standardized tables which reflect the typical depreciation for agricultural improvements and show
34 the "percent good" must be used judiciously during the appraisal process. Percent good tables
35 based on age and typical depreciation are frequently of little use because the percent good for

¹³ Property Tax Rule 122.5 defines fixtures and was amended October 24, 2001, effective February 6, 2002, to specify that permanently affixed wind machines leased for agricultural frost protection are properly classified as fixtures.

1 agricultural improvements is less dependent upon age and more dependent upon maintenance
 2 levels. Each structure will need to be individually examined to determine the appropriate percent
 3 good.

4 The following example demonstrates valuation methods for improvements partially or completely
 5 used for purposes other than their original design.

6 **EXAMPLE - Cost Approach**

7 The subject property is improved with the following structures:

BUILDINGS	DIMENSIONS	ESTIMATED REPRODUCTION COST NEW AREA UNIT COST	ESTIMATED PHYSICAL PERCENT GOOD
Equipment Shed	20 x 50	1,000 sq. ft. @ \$10 = \$10,000	70%
Shop	40 x 60	2,400 sq. ft. @ \$18 = \$43,200	70%
Hay Storage Barn	50 x 60	3,000 sq. ft. @ \$16 = \$48,000	40%
Milk House	10 x 15	150 sq. ft. @ \$35 = \$5,250	40%

8

9 The preliminary survey for the subject property revealed the following information:

- 10 • A change in the county's general plan and relocation of distribution centers has caused
 11 livestock and dairy operations to no longer be economical.
- 12 • Row crop operations represent the highest and best use of agricultural land.
- 13 • All farming operations are mechanized.
- 14 • Old hay barns are used as storage facilities for farm equipment but, due to functional
 15 limitations in their designs, not all of their gross area is useable. Usable storage area for the
 16 50 x 60 barn is only 30 x 50. Typical replacement costs for storage buildings are \$16 per
 17 square foot.
- 18 • Obsolete milk houses are utilized for supply storage and typical replacement costs for this
 19 type of storage are \$35 per square foot.

20 Based on the above information, the replacement costs are estimated as follows:

21

Buildings	Replacement Size (Square Foot)	Replacement Unit Cost	Replacement Cost New	Estimated Physical Percent Good	Depreciated Cost
Equipment Shed	1,000	\$10	\$10,000	70%	\$7,000
Shop	2,400	\$18	\$43,200	70%	\$30,240
Barn	1,500	\$16	\$24,000	40%	\$9,600
Milk House	150	\$35	\$5,250	40%	\$2,100

Indicated Depreciated Cost of Improvements: \$48,940

IRRIGATION IMPROVEMENTS

CLASSIFICATION

Irrigation and drainage systems represent significant monetary investments. For assessment purposes, the individual system components must be appropriately identified and classified as land, improvements, or personal property. Proper classification is essential since special assessments may apply against land only or land and improvements only; the classification of an individual component may affect the application of a particular appraisal technique; and future assessed values will be affected by classification when removals or replacements occur due to differing base year value rules for the various classifications of property.

Property Tax Rules 121 through 124 contain the criteria for classification and provides a partial list of items in the different categories. For example, under these rules wells (hole, casing, gravel pack) are classified as land; pumps, motors, underground distribution systems, and concrete lined ditches are classified as improvements; ditches, canals, and earth-filled reservoirs, unless concrete lined, are classified as land. In porous soils, reservoirs and canals are frequently lined with special clays or other earthen substances and are classified as land.

Materials added solely for land drainage to make land arable, such as underground drainage pipe (concrete, plastic, tile, etc.), sand traps, and observation wells, are classified as land. Equipment and structures such as pumps, motors, and platforms are classified as improvements.

Some components of irrigation systems are borderline cases and not easily classifiable. Real property and personal property appraisals should be coordinated to ensure that all components are appropriately identified and valued, but not double assessed.

VALUATION PROBLEMS

An irrigation system's value should reflect the market contribution to the agricultural unit under appraisal. However, because irrigation systems and practices vary so extensively, an analysis must be conducted to determine how the local market typically values each type of land

1 improvement. An irrigation system may represent an over- or underimprovement, and a
2 determination must be made whether the system has sufficient capacity to adequately serve the
3 agricultural operation. Water demand and correct water application is determined by three major
4 factors: (1) water needs of the crops, (2) water availability, and (3) ground water storage
5 capacity. Generally, an adequate irrigation system should be capable of delivering between six to
6 eight gallons per minute for each productive acre. To illustrate, a 640 acre farm requires an
7 irrigation system capable of providing 3,840 to 5,120 gallons per minute. However, under certain
8 conditions, a greater supply of water may be required.

9 Care must be exercised not to value irrigation improvements twice. Typically, in areas where
10 irrigation is necessary for agricultural operations, all comparable sales will have similar irrigation
11 systems and no adjustments to the sales are required unless they have improvements that are
12 superior or inferior to those on the subject. Similarly, economic rents for irrigated land typically
13 include income generated by irrigation improvements. ~~When such income includes these~~
14 ~~improvements, a charge must be made against this income for the improvements before~~
15 ~~capitalizing it into value. If this income is capitalized into value without making charges against the~~
16 ~~income for the improvements, the capitalized earning ability will include the value contribution of~~
17 ~~the irrigation system.~~ If the appraiser desires to work with an economic rent that excludes
18 irrigation improvements, a charge must be deducted that provides a return on and a return of the
19 irrigation improvements. A reasonable charge can be estimated by multiplying the irrigation
20 improvement's value (RCNLD) ~~times by a market-based capitalization rate the appropriate~~
21 ~~periodic repayment factor that includes yield and recapture, plus a property tax component both a~~
22 ~~return "on" and "of" the investment.~~

23 There is some hesitation to accept the classification of wells as land since wells have certain
24 improvement characteristics that include depreciation and maintenance expense. These
25 characteristics create no problem with the comparative sales approach since the market directly
26 measures the effects of depreciation. However, with the income approach, maintenance and
27 recapture charges need to be deducted from potential gross income. The following example
28 illustrates the appropriate procedure for processing income generated by an agricultural property
29 with an irrigation well and pumping system improvements.

30 **EXAMPLE**

31 Subject is a 160 acre farm with an 8 year old pumping plant that lifts water 200 feet through a 12
32 inch gravel packed well with typical perforated casing.

33

1	Income: Cash rent, 160 acres @ \$120	\$19,200
2	Owner's Expenses:	
3	Insurance	\$200
4	Management	\$800
5	Pumping Plant Maintenance	
6	\$10,000 RCN x 1%	\$100
7	Well Maintenance	<u>\$100</u>
8	Total Expenses	<u>\$1,200</u>
9		
10	Net Property Income	\$18,000
11		
12	Income Imputed to Pumping Plant (Return "on" and "of" pump)	
13	RCNLD \$6,800 x .083046	
14	<u>106%: (5% Y + 1% ETR + 4% R)</u>	<u>\$680565</u>
15	<u>Periodic Repayment* (6%; 22 yrs; Annual)</u>	
16	<u>8 Year Old Pumping Plant with Remaining Productive Life of 22 Years</u>	
17	<u>*Periodic repayment includes both a return "on" and "of" the investment.</u>	
18		
19	Income Imputed to Land and Well	<u>\$17,32017,435</u>
20		
21	Recapture Charge (Return "of" well)	
22	Estimated Productive Life of Well is 40 Years	
23	Replacement Cost New is \$2,400	
24	<u>\$2,400 ÷ 40 Years x .008278</u>	<u>\$6020</u>
25	<u>Sinking Fund Factor (5%; 40 yrs; Annual)</u>	
26		
27	Net Income Earned by Land and Well	<u>\$17,26017,415</u>
28	Capitalized Value of Land Including Well	
29	<u>\$17,260-17,415 ÷ 6%: (5% + 1%) =</u>	<u>\$287,666290,250</u>
30	Value of Pumping Plant Improvements	
31	Pumping Plant RCN \$10,000 x 68% Good	<u>\$6,800</u>
32		
33	Total Property Value	<u>\$294,466297,050</u>
34		Rounded <u>\$294297,000</u>
35		

36 In this illustration, the well's cost per acre is \$15 ($\$2,400 \div 160$ acres) and the charge for
37 depreciation ($\$60-20 \div 160$ acres) is minimal. However, this amount could vary considerably
38 depending on the age and cost of the well involved. Even though it may be practical to overlook
39 depreciation for relatively inexpensive wells, it is good appraisal practice to apply an income
40 analysis to determine the full amount of depreciation and whether it represents a significant
41 consideration.

1 In many instances, private wells and irrigation systems have become inoperative or suffered
2 obsolescence after irrigation districts were created. Under these circumstances, the private water
3 system may be valuable for standby use only, and an analysis should be conducted to determine
4 the private water system's contribution to the total property value.

CHAPTER 5: APPRAISAL OF CROP LAND

GENERAL

Cultivation of land, when economically feasible, allows agricultural operators to bring the land to its highest and best use and to produce food, feed, and fiber for human and animal consumption. The term "crop land" refers to cultivated (generally irrigated) land as opposed to noncultivated land types including rangeland, forest land, or nonirrigated pasture land.

The intensity of modern cultivation varies from simple agricultural operations (irrigated pasture) to complex agricultural operations that produce vegetables, nursery products, orchards, and vineyards. In terms of agronomic theory, soil, water, and climatic conditions are least essential for field crops; more important for row crops; and most indispensable for orchard, vineyard, and specialty crops. In actuality, any one of these crop types may be found in agricultural production on Class I, Class II, or Class III soil.

VALUE OF CROP LAND

The term "crop land" generally refers to land planted to seasonal commodities such as cotton, potatoes, tomatoes, rice, vegetables, melons, and truck crops. There are certain exceptions, the most notable being alfalfa which is a perennial. Crop land does not include orchards, vineyards, or pasture. "Row crop production" generally refers to a specific method of planting, cultivation, and harvesting.

The value of crop land is directly related to its capacity to produce agricultural commodities for domestic or foreign consumption and is only as valuable as the present worth of its income earning ability. Land value cannot be directly related to a specific soil type because soil is but one of many factors that contribute to value.

The value of crop land cannot be directly associated with a specific crop type, although land adaptable for a variety of crops, or potentially high-return commodities, is generally more valuable than land with inferior adaptability or lower-return commodities. The selection of comparable sales requires the consideration of comparable cropping patterns, not just the comparability of soil types.

CROP ROTATION

Crop rotation is perhaps the most overlooked aspect of agricultural production and refers to the practice of planting different crops in a systematic order over a specific period of years. This practice is important for three reasons:

1. It employs the land to its highest and best use providing for the greatest economic return.
2. It provides good cultural practices that retains the soil's natural fertility.

- 1 3. It allows for fairly accurate future income forecasts.
- 2 This historical base is needed to refine future income estimates for property and predict the
- 3 direction of future production.
- 4 Here is an example of a hypothetical rotation.

CROPS GROWN	YEARS PLANTED
Alfalfa	3
Sugar Beets	2
Tomatoes	2
Milo	1
Total Years in Rotation	8

5

6 Tomatoes yield a higher net income than grains or alfalfa; however, continued plantings of

7 tomatoes begin to result in lower annual commodity yields because repeated use for one crop type

8 encourages diseases and pests hosted by that plant and depletes the inherent fertility of the soil.

9 While agricultural producers may have a specific crop rotation planned, it may not be followed

10 from year to year. Favorable market conditions and unexpected contingencies may dictate what

11 crops are planted by agricultural producers during any one year. However, over an extended

12 period of time, cropping patterns may result in fairly accurate predictions regarding future income.

13 To ensure adequate crop rotation, landlords may deliberately lease acreage to a series of

14 diversified tenants specializing in different crops. This routine ensures that appropriate cultural

15 practices are observed and results in the highest possible return to the landlord. The high cost of

16 specialized agricultural equipment precludes many agricultural producers from raising multiple

17 crops, so the above technique can result in maximum productivity.

18 When crop rotations are followed, there may be wide variations between gross and net incomes

19 between various years. Inaccurate value conclusions may result if a single year's income is used as

20 the basis for future income projections. Agricultural properties are purchased on the basis of

21 potential future income, and this income tends to follow the average income resulting from a long-

22 term rotation cycle. Wide fluctuations in annual incomes or rents should be carefully analyzed

23 over at least a three-year period. The following example illustrates the analysis of crop rotations

24 to calculate future income.

25 **EXAMPLE**

26 A 320 acre field is annually planted to these rotation crops. Thus, in every year, each crop

27 occupies an acreage which is proportional to its percentage of the total rotation cycle.

1 **Method 1**

CROPS GROWN	YEARS PLANTED
Alfalfa	3
Sugar Beets	2
Tomatoes	2
Milo	1
Total Years in Rotation	8

2

3 If the 320 acre field is divided by the 8-year crop rotation cycle, the result will be 40 acres for
 4 each individual crop for each cycle year.

5

CROP	YEARS		ACRES		AVERAGE ANNUAL ACRES
Alfalfa	3	x	40	=	120 acres
Sugar Beets	2	x	40	=	80 acres
Tomatoes	2	x	40	=	80 acres
Milo	1	x	40	=	40 acres

6

7 The acreage of each crop, the yield, and the price per unit are multiplied, and the result is the
 8 portion of total annual income earned by each crop. The gross earning ability for the 320 acres is
 9 calculated by combining all of the crop earnings. This procedure is illustrated as follows.

10

CROP	AVERAGE ANNUAL ACREAGE		TONS ¹⁴ PRODUCED PER ACRE		PRICE PER TON	GROSS INCOME
Alfalfa	120	x	8	x	\$115	\$110,400
Sugar Beets	80	x	30	x	\$38	\$91,200
Tomatoes	80	x	35	x	\$56	\$156,800
Milo	40	x	4	x	\$125	\$20,000
Total	320					\$378,400

1 \$378,400 ÷ 320 Acres = \$1,182.50 Average Annual Gross Income Per Acre

2 The following illustrates an alternative way to analyze and calculate a rotation cycle. In this
 3 instance, the particular size of a property is irrelevant. The income and production is computed
 4 on a gross income per acre basis, and then a total income for the crop rotation cycle is calculated.

5
 6 **Method 2**

CROP	TONS PRODUCED PER ACRE	PRICE PER TON	GROSS INCOME PER ACRE	YEARS GROWN	98-YEAR GROSS INCOME PER ACRE
Alfalfa	8 ¹⁵	\$115	\$920	3	\$2,760
Sugar Beets	30	\$38	\$1,140	2	\$2,280
Tomatoes	35	\$56	\$1,960	2	\$3,920
Milo	4	\$125	\$500	1	\$500
Total					\$9,460

7 \$9,460 ÷ 8 years = \$1,182.50 Average Annual Gross Income

8 How income and expense figures are received from an agricultural producer may determine which
 9 of the two methods to employ. However, the latter method is generally easier to apply to
 10 different property types and utilizes smaller values which are more easily manipulated.

11 Crop rotation information similar to the foregoing may be utilized in several ways. If a property is
 12 owner-operated, the gross income figures are used to calculate the average annual net income per
 13 acre. If property is leased on a share-crop basis, typical operating percentages are applied to the

¹⁴ Production and price figures should be forecasted based on an analysis of past history and future expectations as discussed in Chapter 3, Annual Income Estimates.

¹⁵ Alfalfa tonnage will vary from year one to year three. The eight ton per acre yield is the average of the three-year life.

1 gross income to determine the average annual gross income paid to the owner. In either case,
2 owner-operated or tenant-operated, knowledge of crop rotation patterns is an essential part of the
3 appraisal process.

4 **INCOME CAPITALIZATION**

5 The income approach is commonly used in the valuation of crop land and if the subject has no
6 improvements and significant changes in income are not anticipated, direct capitalization into
7 perpetuity is appropriate. When the subject has improvements, provisions for their recapture
8 must be included.

9 Another technique for valuation of income-producing properties is the gross rent multiplier
10 (GRM). This technique is based on an overall relationship between rental/lease income and total
11 value. It provides an estimate of total property value in a direct manner that reflects the thinking
12 of active market participants. GRM is a beneficial tool and is readily adaptable for the appraisal
13 of row crop lands. The advantage of GRM's is the ease of application and utilization with either
14 cash or share rents (if both cash and share rents are utilized, the rents must be converted to
15 whichever basis that will be used on the application of the GRM). The following example
16 illustrates the derivation of a GRM.

17 A 240 acre row crop parcel, leased on a share crop basis, sells for \$600,000. The owner's share
18 of annual income is \$100 per acre per year, or \$24,000 before taxes and other expenses. In this
19 specific example, the GRM is 25 ($\$600,000 \div \$24,000$) and this multiplier can be used as part of
20 the appraisal process to estimate the value of comparable properties with gross income
21 determined by share-rental analysis.

22 **COMPARATIVE SALES APPROACH**

23 In the comparative sales approach, the prices of recently sold properties with similar physical
24 characteristics are directly related to the subject property to determine the subject's value. The
25 validity of this approach is in direct proportion to the degree of comparability existing between
26 the comparable sales and the subject property. Such comparability is ascertained by the physical
27 and economic attributes discussed in Part I, Chapter 3.

28 In regions where irrigation is essential for agricultural production and where the subject and all
29 comparable sales have similar irrigation systems, the most common unit of comparison for row
30 crop land is the price per irrigated acre. In regions where irrigation is supplemental or where
31 agricultural properties have different irrigation systems, the unit of comparison is normally price
32 per acre of bare land.

33 The comparative sales approach is based on the principle of substitution and assumes that the
34 value of a property will approximate the selling prices of competitive market substitutes. This
35 technique is simple in application and offers direct market evidence of land values. Furthermore,
36 Rule 4 provides that the comparative sales approach is the preferred method of valuation when
37 reliable market data are available.

1 CROPS CLASSIFIED AS LAND

2 Several crops are classified as land even though they display the characteristics of short-lived
3 improvements (see Property Tax Rule 124).

4 Asparagus is a perennial plant with an economic life of approximately 10 years, and it is typically
5 not grown beyond one 10 year period in the same location. While the value of asparagus must
6 appear on the tax roll as land, its separate value must be identified when using the cost or income
7 approaches so that proper consideration is given for recapture of the plant investment. The
8 comparative sales approach is the preferred method for valuation of asparagus.

9 Artichokes are perennial plants with an economic life of approximately five to seven years.
10 However, due to the climatic requirements of the plant, suitable land available for growing
11 artichokes is used almost continually for production. As with asparagus, the comparative sales
12 approach is the preferred method of valuation. If the cost or income approaches are utilized,
13 proper consideration must be given for recapture of the plant investment.

14 Date palms are exempt until four years after the season in which they were planted pursuant to
15 article XIII, section 3(i) of the California Constitution. Section 105 requires date palms under the
16 age of eight years to be enrolled as land.

17 Strawberry plants are classified as land, and the courts have held that a strawberry plant is not a
18 vine for purposes of section 105, and does not fall within the definition of improvements. For the
19 required separate assessments of land and improvements, strawberry plants may not be assessed
20 separately from land.¹⁶

21 CROP ALLOTMENTS/PRODUCTION CONTRACTS

22 Under current (1977) federal regulations, allotments are virtually nonexistent in California.
23 However, the United States Department of Agriculture (USDA) through a suborganization
24 known as the Commodity Credit Corporation (CCC) does execute a limited number of contracts
25 for a landowner to produce certain crops.

26 If the property is subject to a Production Flexibility Contract with the USDA, the revenue
27 received by the landowner should be considered in determining the income to be capitalized.
28 Such contracts do not fulfill the requirements of an enforceable restriction within the meaning of
29 section 402.1 since they are terminable at the will of either party, the government agency or the
30 landowner, at any time. Consequently, there is no assurance that the contract terms and/or
31 restrictions will be in place in the predictable future.

¹⁶ County of Monterey County v. Madolora (1959); 171 Cal.App. 2d 840.

Chapter 6: APPRAISAL OF GRAZING LAND

GENERAL

More land in California is used for livestock grazing than for any other agricultural purpose, and millions of acres of nonarable lands produce the natural grasses, shrubs, clovers, and herbaceous forage plants that constitute the primary source of livestock feed. Feed production differs widely depending upon location, climate, season, elevation, vegetation type, amount, plant quality, soil quality, and annual rainfall. Diversity in annual rainfall, 80+ inches in areas of Northern California to 1+ inch in the Southern California desert areas, is the principal reason for differences in carrying capacity throughout the State of California.

The appraisal process applies to grazing land just as other agricultural properties. The income and comparative sales approaches provide the most valid indicators of rangeland values. The cost approach is seldom applicable in the valuation of native pasture and grazing land and has limited application in the appraisal of improved pastures.

DATA FOR THE APPRAISAL OF GRAZING LANDS

The logical and systematic steps required for any appraisal problem are applied to the special features of ranching. Data for grazing lands should include, but are not limited to:

- Recent sales data
- Recent lease or rental data
- Transportation systems to markets
- Market facilities
- Climatic conditions
- Topography
- Type of operation
- Type of operation best suited to the area
- Ranch resources
- Available forage
- Estimated carrying capacity
- Grazing practices in the area
- Water availability
- Special considerations for the subject property

1 ANIMAL UNIT SYSTEM

2 GRAZING LAND TERMINOLOGY

3 Listed below are terms and definitions widely accepted and used in the livestock industry.

4 Animal Unit (AU)

5 An animal unit (AU) refers to a specific unit of measurement defined as a two-year old range cow
6 or steer weighing 1,000 or more pounds. This unit of measurement provides a benchmark against
7 which other sizes of cattle or sheep can be correlated and measured. A 1,000 pound range cow
8 or steer equals 100 percent of one AU, a 500 pound steer equals 50 percent, and each one
9 hundred pounds of animal weight is equivalent to 0.1 AU. (Five mature sheep equals one AU.)

10 Animal Unit Month (AUM)

11 An Animal Unit Month is the basic unit of measurement used to express the feed requirements to
12 maintain one animal unit for a one month period, or, alternately, the acreage necessary to produce
13 the feed requirements to maintain one animal unit for a one month period.

14 AUM is a basic formula $A \times U \times M = AUM$ in which:

- 15 • A = Number of head of livestock
- 16 • U = Size of the animal unit by decimal equivalent
- 17 • M = Number of months

18 An illustration of this formula is as follows. One hundred stockers grazing for six months and
19 average 600 pounds each (go on at 500 pounds, come off at 700 pounds): $100 \times 0.6 \times 6$ months
20 = 360 AUM's.

21 Animal Unit Year (AUY)

22 Sometimes referred to as a "cow-year-long" (CYL), an animal unit year is defined as the number
23 of head of mature stock that could be maintained for a full year on a specific parcel of land
24 without substantially harming plant growth, vegetative cover, or soil conditions, while maintaining
25 satisfactory levels of livestock grazing. An AUY is typically stated in terms of the number of
26 acres required to maintain, not fatten, one adult cow or steer.

27 Carrying Capacity

28 Carrying capacity is defined as the number of animal units (stated in animal units, AU's, or animal
29 unit months, AUM's) a specific property will support without excessive harm to plants and soils.
30 Alternately, carrying capacity is defined as the number of livestock a specific property will support
31 without substantially harming plant growth, vegetative cover, and soil conditions while
32 maintaining satisfactory levels of livestock grazing.

33 Carrying capacity varies with the seasons because most range forage is seasonal and perishable.
34 Ideally, forage is most beneficial if consumed when high in nutrients. Unless eaten while still

1 tender, forage can be unpalatable. The carrying capacity differs among the various types of
2 livestock and, depending upon the individual region, may be more adaptable to cattle or sheep.
3 Cattle tend to make better use of some regions while sheep do better in other locales.

4 Carrying capacities vary from five to seven acres per animal unit on high yield coastal rangelands
5 to 200 or more acres in the arid regions of the state. The extreme variations in the quality and
6 quantity of forage cause large variations in land values.

7 Carrying capacity can be expressed in any one of three ways:

- 8 • The number of AU's that a specific property can sustain for one year. For instance, a 1,300
9 acre ranch might have a carrying capacity of 65 AU.
- 10 • The number of acres required to maintain one AU for one year. In the above example, 20
11 acres are required per AU (1,300 acres ÷ 65).
- 12 • The AUM's of feed produced by one acre. In the above example, the AUM is 0.60 (12
13 months ÷ 20 acres).

14 **ANIMAL UNIT EQUIVALENTS**

15 Rangeland carrying capacity is expressed in terms of AUM's per acre for a full year with annual
16 yields varying from less than 0.1 AUM per acre for arid land to 2.0 AUM per acre for the high-
17 quality coastal ranges. On the lower end of the carrying capacity spectrum, 20 acres may be
18 required to support one AU for one month, and on the upper end of the spectrum, one-half acre
19 might carry one AU for one month. The estimated annual average carrying capacity for all
20 California rangeland is 23 acres per AU, which equates to 0.52 AUM per acre (12 ÷ 23).

21 **Total Digestible Nutrients (TDN)**

22 TDN is a unit of measurement that reflects the portion of consumed feed that is digested and
23 utilized by an animal for growth and maintenance and not passed as waste. TDN, expressed in
24 total pounds, varies with the type of feed and includes digestible proteins, carbohydrates, and fats.
25 A conversion table for various common feeds into total pounds of TDN appears later in the text.

26 **Calories**

27 A calorie is the unit of measurement used to express the nutritional quality of feed.

28 **Supplemental Feed**

29 Supplemental feed is defined as sufficient available seasonal feed to support livestock operations
30 throughout the year. Supplemental feed may consist of the following:

- 31 • Hay, alfalfa, oats, Sudan grass, and barley are cut, dried, baled, and stored to supplement
32 natural feed supplies when grazing is sparse or nonexistent.

- 1 • Crop residues include grain stubble, sugar beet tops, corn, or other crops left in agricultural
2 fields during late summer to early winter that can be consumed by livestock. Typically, land
3 of this type is rented on a per acre or per head basis.
- 4 • Green feed, or green chop, refers to forage crops that are cut and immediately fed to
5 livestock rather than stored. This type of feed program increases labor and equipment costs
6 but reduces grazing damage to crops.
- 7 • Silage refers to green crops (alfalfa, corn) cut and stored in silos and used for winter
8 feeding of cattle or stockers.
- 9 • Concentrates include a variety of grains, seeds, oil meals, or other by-products with high
10 energy and nutrient content. Although livestock can be raised on forage crops exclusively,
11 the production results are sometimes uneconomical and concentrates are given to finish
12 livestock for market or to supplement low quality forage.

13 In addition to mature bovine animals, forage is consumed by other animals including calves,
14 yearlings, horses, sheep, and swine. The following table shows the comparable feed requirements
15 of different animals.

16

Animal Units Per Head Conversion Factor to Standard AU

Beef cow	2 Years and Over, Average	1.00
Calf	4 to 8 Months, Average	0.30
Weaner Calf	8 to 9 Months, 350-400 Pounds	0.45
Yearling (Steer or Heifer)	600-700 Pounds	0.75
Beef Stocker	Per 100 Pounds of Weight	0.10
Bull, Heifer, Steer	Two Years Old	1.00
Horse	Light Work Horse	1.00
Horse	Heavy Work Horse	1.50
Ewe, Ram, Wether	Over One Year	0.20
Lamb	Weaning to One Year	0.15

17

18 When a supplemental livestock feed program is necessary and the feed is obtained from outside
19 sources, the animal unit equivalent of the feed must be deducted from the indicated carrying
20 capacity of the property. An animal unit in terms of feed requirements is equivalent to 4,800
21 pounds of total digestible nutrients (TDN) per year, while one AUM is equivalent to 400 pounds
22 of TDN.

1 The TDN listed in the following chart represents averages for the specific feed type. TDN
 2 content is superior in dry feed because excess water content has been removed from the original
 3 green chop. Various agricultural publications provide complete listings of feeds along with their
 4 nutritional content. It is essential that supplemental livestock feeding programs be considered
 5 during the appraisal process and that their nutritional contribution not be erroneously attributed to
 6 rangeland.

7 **TDN Content by Weight of Some Common California Feeds**

	GREEN	DRY
Mixed Range Grass	15% to 18%	50%
Bromes	20%	49%
Burr Clover	15%	55%
Alfilaria	9%	48%
Fescues	22%	52%
Wild Oats	24%	50%
Rye	18%	52%
Vetch	15%	55%
Hay (All Varieties)	Average	50%
Alfalfa (Pasture or Chopped)	15%	
Sudan	15%	
Stubble (Barley and Wheat)		42%
Barley Pasture	13%	52%
Wheat Pasture	13%	48%
Beet Tops and Fresh Mill Pulp	11%	
Silages	12% to 18%	
Concentrates		75% to 90%

8 **GRAZING OPERATIONS**

9 There are three basic types of grazing operations: cow-calf, stocker, and feeder.

10 **COW-CALF OPERATIONS**

11 This type of operation is concerned with producing as many calves as possible from the breeding
 12 herd and have them gain all the weight possible at the lowest cost. For this operation to be

1 profitable, the ranch must be capable of producing inexpensive forage to sustain the herd on a
 2 year-round basis. This type of operation is typically found on rangeland suitable for year-round
 3 grazing, rather than on seasonal grazing ranges. The calves graze with adult cattle on the
 4 rangeland during the summer months while forage is plentiful and are sold in the fall. In this
 5 category there are two different subtypes of operation: replacement heifers taken from calf crop
 6 and replacement heifers purchased each year.

7 **Replacement Heifers Taken From Calf Crop**

8 A rancher maintains a cow herd year-round to produce calves, carries the calves to weaning, sells
 9 off the calf harvest, and retains only the heifers necessary to maintain the herd on a rotational
 10 basis. The principal products are 300 to 500 pound calves and cull cattle. For this type of
 11 operation, the AU equivalent is approximately 1.4 to 1.5 AU per cow.

12 Assume 100 cows with an 85 percent calf crop (after accounting for death loss).

100 Cows (80 Old and 20 Third Year Heifers)	1 Year x 1.0 AU	100 AU
5 Bulls	1 Year x 1.0 AU	5 AU
20 Two Year Old Replacement Heifers	1 Year x 1.0 AU	20 AU
85 Calves (To Sale Time)	0.33 Year x .3 AU	8.5 AU
20 One Year Old Replacement Heifer Calves	0.50 Year x .6 AU	6 AU
	Total	139.5 AU
	Rounded	140 AU

13 $140 \text{ AU} \div 100 \text{ Cows} = 1.4 \text{ AU Per Cow}$

14 Some ranchers observe this marketing plan but some, instead of selling weaner calves, keep the
 15 weaners for a few extra months and sell yearlings. The principal products for this alternative
 16 marketing plan are 700 pound heifers, 800 pound steers, and cull cattle. For this type of
 17 operation, the AU equivalent is approximately 1.7 AU per cow. The calculations would be
 18 similar to the above example, with more carrying time allotted to the calves and correspondingly
 19 higher AU equivalents.

20 **Replacement Heifers Purchased Each Year**

21 A rancher maintains a cattle herd year-round to produce a maximum calf crop, carries the calves
 22 to weaning, sells the entire calf harvest, and purchases replacement heifers. Again, the principal
 23 products are 300 to 500 pound calves and cull cattle but, for this type of operation, the AU
 24 equivalent is approximately 1.1 to 1.2 AU per cow.

- 1 Assume 100 cows with an 85 percent calf crop (after taking account of death loss).

100 cows	1 Year x 1.0 AU	100 AU
5 bulls	1 Year x 1.0 AU	5 AU
85 calves	0.33 Year x .3 AU	8.5 AU
Total		113.5 AU

- 2 113.5 AU Divided by 100 Cows = \pm 1.14 AU Per Cow

- 3 Generally, cow-calf operations have year-round feed sources along with stable feed requirements
4 and, during good weather years, will produce feed in excess of their usual needs. In such
5 instances, the rancher may purchase additional feeder cattle or lease a portion of the rangeland to
6 other ranchers.

7 **STOCKER/FEEDER OPERATIONS**

- 8 Stocker operations are concerned with adding weight and size to young and small cattle by
9 utilizing seasonal pasture or rangeland. Ranchers start with weaner (stocker) calves and sell
10 yearling feeders. When the forage has been depleted, the cattle are either moved to new pasture
11 or sold. This marketing plan allows more money to be invested in cattle than land because
12 frequently sufficient seasonal pasture is available to avoid significant capital investments in land.

- 13 Feeder operations are also concerned with adding weight to animals. They attempt to increase
14 the value of that additional weight by improving the quality or grade. Feeder cattle are typically
15 confined and fed high-energy feed concentrates (50 percent grains and 50 percent hay). Feeder
16 cattle do not forage and, consequently, there are larger investments required for care, labor, and
17 equipment. Feeders that have been properly fattened command higher prices because they will
18 grade out higher and yield more usable meat. Historically, operators who purchase feeders and
19 fatten them for market resale are located in areas with an abundance of feed grains. Profits are
20 realized when selling prices, after fattening and other operating expenses, are greater than the
21 initial purchase prices and when the value of the increased weight gain exceeds feed costs and
22 other operating expenses.

- 23 The following illustration demonstrates how to accurately convert animals to units for a stocker
24 operation.

1 EXAMPLE

2 All animals are the same age and graze for the same number of months. The conversion formula
3 is: (Number of head) x (AU equivalent) x (Percent of feed from grazing) x (Number of months) =
4 AUM. AUM divided by 12 equals AU carrying capacity.

5 400 yearling steers receive 90 percent of their feed, for 150 days, from three sections of rangeland
6 totaling 1,920 acres. The carrying capacity would be calculated as follows:

7 $400 \text{ Head} \times 0.75 \text{ AU Per Head} \times 0.90\% \text{ of Feed} \times 5 \text{ Months} (150 \div 30) =$

8 $400 \times 0.75 \times 0.90 \times 5 = 1,350 \text{ AUM}$

9 $1,350 \text{ AUM} \div 12 \text{ Months} = 112.5 \text{ AU for the Rangeland}$

10 $1,920 \text{ Acres} \div 112.5 \text{ AU} = 17.07 \text{ Acres Per AU}$

11 $12 \text{ Months} \div 17.07 \text{ Acres Per AU} = 0.70 \text{ AUM Per Acre, or}$

12 $1,350 \text{ AUM} \div 1,920 \text{ Acres} = 0.70 \text{ AUM Per Acre}$

13 The above example indicates the rangeland has a carrying capacity of 112.5 AU, each AU will
14 require 17.07 acres per year, the carrying capacity is 0.70 AUM per acre, and enough feed will be
15 produced on one acre to sustain one mature cow for 21.4 days.

16 AU METHOD AND THE COMPARATIVE SALES APPROACH

17 The animal unit provides a simple and accurate method for comparing grazing lands, similar to
18 direct comparison for commercial and residential properties in the comparative sales approach.

19 EXAMPLE

20 Two cattle ranches recently sold, are equal in size, and appear comparable in soils, topography,
21 and water.

22 Ranch "A" - 1,500 acres sells for \$300,000

23 Ranch "B" - 1,500 acres sells for \$200,000

24 In both cases, the terms include 29 percent down, balance due in 15 annual payments, and 7.5
25 percent interest rate on the unpaid balance. Initially, the sales do not appear comparable. Ranch
26 "A" sold for \$200 per acre and Ranch "B" sold for \$133 per acre. However, an analysis reveals
27 that Ranch "A" has a carrying capacity of 187 AU, but Ranch "B," due to extensive brush and
28 wasteland, will carry only 125 AU. Dividing the sales price by the AU capacity indicates:

1 Ranch "A": $\$300,000 \div 187 = \$1,604$

2 Ranch "B": $\$200,000 \div 125 = \$1,600$

3 Despite the differences in the price per acre, both properties sold for \$1,600 per AU. When
4 measured in this manner, the sales are comparable.

5 This method is equally suitable for analyzing and comparing per acre rents. Ideally, the
6 comparative sales approach is supported by a number of recent, relevant sales in the area with
7 similar physical characteristics. The data could be analyzed in the following manner:

8 **Sales Data**

	SALES PRICE	DATE	SIZE (ACRES)	PRICE PER ACRE	CAPACITY
Subject			4,500		285 Cow-Calf for 6 Months
Sale A	\$948,000	9/019 6	4,000	\$237	2,500 Sheep for 5 Months
Sale B	\$705,000	8/960 1	3,000	\$235	600 Feeders, 400-700 Pounds for 5 Months
Sale C	\$542,500	7/960 1	3,500	\$155	140 Cow-Calf for 7 Months

9

10 **Converted to AU**

Subject	285 Cows x 1.4 AU Equivalent x 6 Months = 2,394 AUM ÷ 12 Months	200 AU
Sale A	2,500 x 0.2 x 5 = 2,500 AUM ÷ 12	208 AU
Sale B	600 x 0.6 x 5 = 1,800 AUM ÷ 12	150 AU
Sale C	140 x 1.4 x 7 = 1,372 AUM ÷ 12	114 AU

11

1 **Quality Comparison**

Subject	4,500 Acres ÷ 200 AU = 22.50 Acres/AU
Sale A	4,000 Acres ÷ 208 AU = 19.23 Acres/AU
Sale B	3,000 Acres ÷ 150 AU = 20.00 Acres/AU
Sale C	3,500 Acres ÷ 114 AU = 30.70 Acres/AU

2

3 **Sales Comparison**

Sale A	\$948,000 ÷ 208 AU	\$4,558/AU
or	\$237/Acres x 19.23 Acres/AU	\$4,558/AU
Sale B	\$705,000 ÷ 150 AU	\$4,700/AU
or	\$235/Acres x 20.00 Acres/AU	\$4,700/AU
Sale C	\$542,500 ÷ 114 AU	\$4,759/AU
or	\$155/Acres x 30.70 Acres/AU	\$4,759/AU

4

5 If the appraiser gives less weight to the sheep grazing land sale than to the cattle grazing land
6 sales, the appraiser may decide that \$4,700 per AU is the fair market value. This would indicate a
7 value of \$940,000 for the property, or an overall average of \$208.88 per acre.

8 Sales may be listed for comparison as illustrated below:

	PRICE	SALE DATA	SIZE (ACRES)	PRICE PER ACRE	AU	PRICE PER AU
Sale D	\$875,000	Current	1,500	\$583	187	\$4,679
Sale E	\$576,000	Current	1,580	\$365	120	\$4,800
Sale F	\$260,000	6 Years Ago	800	\$325	50	\$5,200
Sale G	\$2,000,000	4 Years Ago	4,500	\$444	470	\$4,255

9

10 These sales do not suggest any commonalities regarding time, size, and carrying capacity.
11 Lacking a discernible pattern among the sales, somewhat subjective adjustments must be made to
12 obtain an adequate measure of comparability.

13 In a mass-appraisal system, required adjustments to all comparable sales to correlate them to the
14 subject would not be feasible due to time constraints. Instead, only those sales that are most

1 comparable to the subject property should be considered and related on a per animal unit or per
2 acre basis.

3 In the appraisal of grazing lands, minimal adjustments should be necessary for size or location,
4 assuming sales of properties that are relatively comparable in size. Grazing lands are less affected
5 by location than other agricultural properties because ranchers need not live there, and products
6 are easily transported to markets.

7 The difficulty of adjusting comparable sales illustrates the value of using a common denominator
8 such as the AU, particularly since information regarding carrying capacity is commonly available.
9 In contrast, separate valuation of the individual components for grazing operations could be
10 extremely difficult.

11 All grazing land sales for a specific region should be analyzed to indicate the typical AU value. In
12 addition, an analysis of market sales data assists in determining what adjustments are necessary for
13 time, location, size, and other physical characteristics. Grazing land sales are not always plentiful,
14 and numerous sales may not closely conform in terms of various factors. Occasionally,
15 comparable sales may contain nonagricultural amenities such as lake or river frontage, wildlife
16 hunting, adjacent recreational lands, or additional factors that influence value.

17 **INCOME APPROACH**

18 Information necessary to support the income capitalization approach is generally difficult to
19 obtain for agricultural properties. Ranch rental figures are scarce, and estimating owner-operator
20 income and expenses to determine a net income figure attributable to the real property requires a
21 number of subjective assumptions about the contribution of livestock, equipment, capital, and
22 management to the entire operation. These assumptions are essential to produce a reliable
23 estimate of income attributable to the real property. In the income capitalization approach, rental
24 incomes rather than owner-operator incomes are preferable when capitalizing a net income. Even
25 when actual expenses can be obtained, they may be atypical and a misconstrued net income may
26 result. The following example illustrates the use of rental data in the income approach.

27 **EXAMPLE**

28 The subject property is unimproved grazing land containing 960 acres with a historical carrying
29 capacity of 65 cow-calf units—which is equivalent to 78 animal units (65×1.2)—and indicates
30 that 12.3 acres are required to maintain one animal unit.

SALE	ACRES	TOTAL PRICE	PRICE PER ACRE	CARRYING CAPACITY AU'S	ACRES PER AU	PRICE PER AU
A	1,000	\$200,000	\$200	100	10	\$2,000
B	840	\$151,200	\$180	70	12	\$2,160
C	900	\$135,000	\$150	60	15	\$2,250

1

SALE	RENT PER ACRE	TOTAL GROSS RENT	RENT PER AU	TOTAL NET RENT	YIELD RATE
A	\$8.50	\$8,500	\$85.00	\$5,000	0.025
B	\$6.85	\$5,754	\$82.20	\$3,200	0.021
C	\$5.65	\$5,085	\$84.75	\$2,800	0.021

2

3 The above example yields the following conclusions regarding the subject property:

- 4 • Economic rent per acre is \$6.80
- 5 • Economic rent per AU is \$82.00
- 6 • Yield rate excluding property tax is 0.021

7 With these conclusions, the income approach can be completed as follows:

Gross Income 960 Acres @ \$6.80	\$6,528
Expenses	
Insurance	\$50
Management	\$400
Total Expenses	<u>\$450</u>
Net Income (Before Taxes)	\$6,078
Capitalization:	
\$6,078 ÷ (.021 Yield + .01 Taxes)	\$196,065
	Rounded <u>\$196,000</u>

8 The price per acre, based upon the estimated value from the income approach is (\$196,000 ÷ 960)
 9 or \$204±. When compared to sales A, B, and C in the market data chart, this amount appears
 10 reasonable on a per acre basis. This example illustrates the relative simplicity of using rental
 11 income for calculating net income, capitalization rates, and market value.

1 The following example illustrates the difficulties of calculating necessary expenses for use with
 2 owner-operator income. It points out the expenses that must be estimated and areas where errors
 3 may occur.

4 A property contains 5,000 acres and is capable of sustaining a 300 cow-calf unit operation. All
 5 the weaner calves are sold annually and replacement heifers/bulls are purchased. The subject
 6 recently sold for \$503,000, including improvements valued at \$22,000. The new owners brought
 7 their own stock to the ranch for a cow-calf operation.

8 GROSS INCOME

Calves	270 x 500 @ \$0.37	\$49,950
Hunting Rights	5,000 Acres @ \$0.50	<u>\$2,500</u>
	Total	\$52,450

9

10 OPERATING EXPENSE

11 *Cash Expenses*

Labor	One Hired Employee with Furnished Residence	\$6,950
Management	Owner-Operator and Spouse as Bookkeeper	\$10,000
Maintenance and Utilities	Hired Employee's Residence	\$700
Insurance	Workmen's Compensation and Social Security	\$1,800
Veterinarian	Five-Year Average	\$600
Supplemental Feed and Minerals		\$1,450
Miscellaneous		\$1,160
Equipment, Maintenance and Repair		<u>\$2,200</u>
Total Cash Expenses		<u>\$24,860</u>

12

1 **Noncash Expenses**

Residence Amortization	30-Year Life	\$735
Equipment Amortization	10-Year Life	\$1,160
Bull Amortization	5-Year Life RCN @ \$7,500 Salvage @ \$2,700	\$960
Cow Amortization	7-Year Life RCN @ \$74,100 Salvage @ \$60,000	<u>\$2,014</u>
Total Noncash Expenses		<u>\$4,869</u>

2

3 **Return on Investment in Personality**

RCN: 300 Heifers @ 950 Pounds @ \$0.26	\$74,100
15 Bulls @ \$500 Each	<u>7,500</u>
	\$81,600
Salvage: 300 Culls @ 1,000 Pounds @ \$0.20	\$60,000
15 Bulls @ \$180	<u>2,700</u>
	\$62,700
Average Investment: $\$81,600 + \$62,700 \div 2 = \$72,150 @ 4.2\%$	\$3,030
Total Noncash Expenses $(\$4,869 + \$3,030)$	\$7,899
Total Expenses	\$32,759
Net Income $\$52,450 - \$32,759$	\$19,691
Capitalization Rate $\$19,691 \div \$503,000$	3.91%

4

5 If we assume a tax component of 1 percent, the yield rate equals 3.91 percent minus 1.0 percent,
6 or 2.91 percent.

7 The net income is greatly affected by expenses, so care must be taken to ensure the expenses used
8 in the analysis are reflective of typical owner-operator ranching operations. In this particular
9 instance, use of the owner-operator income and estimated expenses produced a fairly accurate
10 capitalization rate. However, rental incomes are preferable and more reliable for deriving an
11 indicated yield rate or net income.

PARCEL VALUE ALLOCATION

The various areas of a ranch may be identified separately as arable, pasture, rangeland, open grazing, timber grazing, brush, or waste. A ranch with several thousand acres might have an average carrying capacity of 25 acres per AU; yet individual locales within the ranch could differ in carrying capacity from seven acres per AU to 100 acres or more per AU. A separate listing or identification by locale enables comparisons, making it possible to accurately allocate value to the areas. However, the total ranching operation forms the basis for comparing the property.

When estimating carrying capacity, it must be determined whether the operator is conducting a typical ranching operation, overstating carrying capacity by not compensating for supplement feeding, or understating the carrying capacity for other reasons.

Values per acre should be allocated according to the various quality levels of grazing land. The subject property in this example contains open graze, scattered timber graze, and brush browse. A field inspection and data analysis established that 12 acres of open graze, 30 acres of scattered timber graze, or 120 acres of brush browse are required to produce the amount of feed necessary to sustain one AU. Assume that comparable sales and income studies support a value of \$1,800 for one AU. Values for the various quality levels of grazing are as follows:

Open Graze	$\$1,800 \text{ Per AU} \div 12 \text{ Acres Per AU}$	\$150 Per Acre
Timber Graze	$\$1,800 \text{ Per AU} \div 30 \text{ Acres Per AU}$	\$60 Per Acre
Browse	$\$1,800 \text{ Per AU} \div 120 \text{ Acres Per AU}$	\$15 Per Acre

SUMMARY

The appraisal of grazing land and ranches requires an awareness of the relationship between the land and the particular type of livestock raised on that land. The number of livestock that can be raised and sold is in direct proportion to the amount and quality of forage vegetation. The unique features affecting ranch values include the type of operations (cow-calf, feeder, stocker), grazing capacity, and the use of owned and/or leased land.

Grazing capacity is measured in different ways, and the appraiser needs to use correctly defined terms precisely and consistently. Grazing capacity can be stated in terms of animal units, animal unit months, cow-year long carrying capacity, and total digestible nutrients. A ranch is considered balanced if it has sufficient seasonal feed to maintain livestock on a year-round basis. Many ranching operations are seasonal in nature and only raise livestock when forage is plentiful and then sell the livestock at the end of the season.

Because livestock can be relocated for forage, ranchers lease grazing lands in addition to those owned in fee simple. The use of leased land improves the livestock carrying capacity, the ranch's earning capacity, and ultimately the market value of the fee-owned lands.

- 1 In the appraisal of ranch properties, the comparative sales approach is the most reliable and most
2 frequently employed method. Comparable sales must be selected with the same type of ranch
3 operation, similar carrying capacities, and reliance on owned or leased lands. As a unit of
4 comparison, either the carrying capacity (stated in AU, AUM, or CYL) or valuation of the
5 individual acreages by land quality may be used.
- 6 The information contained in this section is intended to illustrate procedures and concepts
7 beneficial in the appraisal of grazing lands. Grazing lands vary widely in size, location,
8 topography, access, climate, and improvements, so the procedures presented here may require
9 some modifications in order to be useful. The appraisal of grazing land is a complex subject and
10 knowledge of the livestock industry is required in addition to appraisal principles and procedures.

CHAPTER 7: APPRAISAL OF ORCHARDS AND VINEYARDS

GENERAL

Fruit- and nut-bearing trees and vineyards are exempt from taxation during a portion of their immature life. Section 211 states:

The exemption of fruit- and nut-bearing trees until four years after the season in which they were planted in orchard form and grapevines until three years after the season in which they were planted in vineyard form is specified in subdivision (i) of Section 3 of Article XIII of the Constitution. . . . (Emphasis added.)

The key word in this section is "season." Season refers to the "planting season" regardless of its relationship to the lien date, calendar year, or fiscal year. The example below illustrates the exempt period enjoyed by orchards and shows the appropriate enrollment date:

1996	Year 0	Season of Planting
1997	Year 1	Exempt
1998	Year 2	Exempt
1999	Year 3	Exempt
2000	Year 4	Exempt
2001	Year 5	Enrolled on the Lien Date

The above example shows the trees have four exempt growing seasons after the season in which they were planted. The same arrangement may be used to determine the enrollment date for young vines, except only three years of exemptions are allowed.

In 1999, section 211 was amended¹⁷ to include a new three year exemption period for grapevines or four year exemption period for any fruit- or nut-bearing tree severely damaged during the exemption period by the December 1998 freeze so as to require pruning to the trunk or bud union to establish a new shoot as a replacement for the damaged grapevine or tree. This extension, however, self-eliminates its applicability after 2001 for grapevines and after 2002 for fruit- and nut-bearing trees.

Section 53 makes available property tax relief for grapevines planted to replace grapevines removed because of phylloxera and/or Pierce's Disease provided a county board of supervisors has adopted an ordinance making the provisions of section 53 applicable for its county. The statute provides that the initial base year value of replacement grapevines for grapevines affected

¹⁷ Statutes of 1999, Chapter 291 (SB 1014)

1 by the phylloxera infection or Pierce's Disease, as certified by the county agricultural
2 commissioner, shall be the factored base year value of the removed vines.¹⁸

3 The factored base year value of the removed grapevines under article XIII A limitations is
4 generally less than the current market value of the newly planted grapevines; thus, permitting the
5 replacement grapevines to assume the previous base year value of the removed grapevines
6 generally provides tax relief. The removed grapevines must be less than 15 years of age and the
7 replacement grapevines must be planted on the same parcel as the removed grapevines. The value
8 of the replacement grapevines shall be the base year value of the removed grapevines factored to
9 the lien date of the first taxable year (the fourth year after replanting) of the replacement vines.
10 Since existing law provides that all newly planted grapevines are exempt for the first three years
11 after the season in which they are first planted, the base year value transfer would not take place
12 until three years later. The assignment of base year replacement value, however, shall be limited
13 to that portion of the replacement grapevines that are substantially equivalent to the vines that
14 were replaced, if the replacement vines are planted at a greater density.¹⁹ That portion in excess
15 of a substantially equivalent amount receives a base year value based on current market value.

16 There is one exception to the vine exemption. The kiwi plant is classified botanically as a
17 deciduous vine and cannot be considered either as a grapevine or a fruit- or nut-bearing tree
18 within the meaning of article XIII, section 3(i) of the California Constitution and, therefore, is
19 assessable on the first lien date following planting.

20 Trees and vines are not considered growing crops within the meaning of article XIII, section 3(h)
21 of the Constitution. Instead, they are classified as improvements in section 105(b) of the Revenue
22 and Taxation Code. However, the fruits, nuts, or grapes produced by the trees or vines are
23 exempt as growing crops until they are harvested.

24 In many instances, living improvements include a composite of several different groups or blocks
25 of trees or vines of varying ages, production levels, or varieties. When this occurs, the task of
26 comparing the attributes of a property with the attributes of recently sold similar properties, or of
27 estimating the various levels and lives of income streams, becomes quite difficult.

28 **FACTORS TO CONSIDER IN ORCHARD AND VINEYARD APPRAISAL**

29 Appraisers whose assignments include the valuation of orchards and vineyards (permanent
30 plantings) must have a thorough knowledge of agricultural properties in general and special
31 knowledge concerning the factors that contribute to the value of orchards and vineyards.

32 **DEVELOPMENT TIME AND PRODUCTIVE LIFE**

33 Like other agricultural properties, orchards and vineyards are purchased or developed for their
34 income potential. However, orchards and vineyards present distinct appraisal valuation problems

¹⁸ Statutes of 1997, Chapter 607 (Assembly Bill 122).

¹⁹ Section 53, Statutes of 2000, Chapter 272 (Assembly Bill 1790).

1 because of their productive economic life and changing consumer tastes. In addition to the typical
2 costs of land preparation, planting, and related cultural practices, an investment in an orchard or
3 vineyard is a long-term venture with a period of several years before any cash flow is realized.
4 Both types of crops require several years to reach maturity, and the land is committed to that
5 specific use with little flexibility to other uses. Trees and vines can become obsolete for the same
6 reasons as conventional improvements and, occasionally, the production of a particular variety is
7 superseded by newer, more popular varieties; as a result, the trees and vines must be removed and
8 the land replanted. Changing consumer tastes, competition from foreign and domestic producers,
9 fluctuating cost levels, and urban encroachment are all factors that affect the economic life of an
10 orchard or vineyard.

11 Orchards and vineyards go through three stages of their life cycle:

- 12 • Development (exempt from taxation)
- 13 • Maturity (economic life)
- 14 • Decline

15 After development, the economic life varies in length with different crops and within different
16 varieties of the same crop. Permanent plantings have typical economic lives which can be
17 lengthened by care, maintenance, and good cultural practices. The life span for trees and vines
18 can be shortened considerably through disease, neglect, and improper cultural practices. Some
19 trees and vines die during each growing season and require ongoing replacement as part of good
20 cultural practices.

21 This ongoing replacement of trees and vines enables mature plantings to continue their mature
22 economic life with stable production. For example, a zinfandel grape vineyard may have initially
23 been planted in Napa or Sonoma Counties 80 to 100 years ago. Ongoing replacement of vines
24 may keep the age of the vineyard consistent for 40 to 50 years, a level well within the economic
25 life of the vines.

26 For orchards and vineyards with relatively short-lived economic lives, an advanced age may
27 dictate that all permanent plantings will need to be removed and replanted. Permanent plantings
28 are wasting, or depreciating, assets; ~~and therefore~~ age, condition, and remaining economic life
29 play important roles in their valuation. Trees and vines, like buildings, may continue to be
30 productive after their projected economic life has terminated. From an appraisal standpoint, the
31 valuation of trees and vines is extremely difficult and requires in-depth knowledge of horticultural
32 practices and market conditions.

33 **ROOTSTOCK AND BUDS**

34 The variety of fruit and combination of bud and rootstock have tremendous long-lasting effects on
35 value. Any particular orchard may be a mixture of several varieties of trees and rootstocks.
36 Generally, orchards are developed by planting a specific rootstock selected for soil conditions,
37 climate, disease and insect resistance, size, condition, and other qualities. In some instances, a

1 bud or cutting from another tree type is grafted onto the permanent rootstock. The anticipated
2 result is a new tree system which incorporates desirable qualities from both varieties and results in
3 maximum production of marketable fruit. The same procedures are applicable to vineyards
4 grafted over to a different grape varietal.

5 **CLIMATE**

6 Climate not only limits the types of crops that can be raised in a specific region but also
7 determines the quality of the crop and potential success of an agricultural operation. If the
8 climate is ideal for particular varieties (peaches, plums, nectarines in the Central Valley), the fruit
9 can be grown more economically, with greater confidence, and with less compensation for
10 climatic problems.

11 Temperature-sensitive trees and vines have a complex set of growing requirements. Winter
12 temperatures must be cold enough to fulfill their dormancy requirements, but not cold enough to
13 kill or damage the trees and vines. If these requirements are not met, the result is delayed
14 foliation which reduces crop production for that year. Temperature and light requirements must
15 also be met to adequately mature the crop during the growing season.

16 The physical condition of trees and vines is dependent upon having proper nutrition, good soil,
17 proper irrigation, good cultural practices, and protection from disease and pest infestations.

18 The appraiser should be aware of plant diseases and predominant pest problems in the appraisal
19 areas and should be able to recognize such problems in the field. These problems vary from
20 nematodes (minute worms) in the soil to viral diseases of the trees or vines. A reliable source for
21 this type of information is the local farm advisor.

22 **SOIL**

23 The productivity of trees and vines is heavily influenced by both soil conditions and cultural
24 practices. In some instances, soil deficiencies can be surmounted by prudent management or the
25 addition of soil amendments and fertilizers if these expenditures are economically feasible.
26 However, the inherent fertility of the basic soil is the most important factor in estimating future
27 productivity for any property. Both topsoil and subsoil must be appropriate for the crop and
28 variety selected, although topsoil can be amended by the addition of nutrients. The depth of the
29 ground water table should be determined because if the water table is shallow (perched), water
30 may soak the soil and any excess acid or alkali may damage the trees. Trees and vines do not like
31 standing water, so an adequate drainage system is essential to remove excess moisture, thus
32 avoiding root rot. Trees and vines may literally drown when air is completely flooded out of their
33 root zone.

34 Trees and vines usually develop best on soils that are naturally deep (six feet or more), sandy or
35 silty loams with adequate drainage. Most varieties of trees and vines grow better in well-aerated
36 soil, but exact soil requirements vary considerably among varieties. Generally, most trees and

1 vines grow best in slightly acid soil (5.5 to 6.5 pH factor), but there are exceptions to this and the
2 other preceding guidelines.

3 **IRRIGATION**

4 Because most orchards and vineyards involve major investments of time and money, they must
5 have irrigation systems to ensure adequate water at crucial times during the growing season.
6 Insufficient water delivery will result in undersized fruit that may not be marketable to commercial
7 packers and shippers. Orchards and vineyards have relatively large water requirements and these
8 specific water concerns must be addressed as part of the appraisal process: adequacy, quality,
9 source, dependability, and cost.

10 **FROST PROTECTION**

11 The majority of orchards and vineyards are planted in areas that experience some degree of frost.
12 Trees and vines are unique in that they are among the few crops for which frost protection
13 systems have been devised. The two basic systems utilized are wind machines and irrigation
14 systems. Wind machines typically consist of elevated engines with single or multiple aircraft-
15 propellers that recirculate the airflow over, around, and through the orchard. An irrigation frost
16 protection system (either by flooding or solid-set sprinklers) delivers water that is warmer than the
17 outside ambient air temperature, protecting the trees or vines.

18 **PRODUCTION AND MARKETING**

19 Fruits can be produced for either the fresh or processing (canning) market, and the demands of
20 each market are different. The fresh market is concerned with the size of the fruit and, generally,
21 the larger the size of the fruit, the better market acceptance it receives. What constitutes a
22 desirable size is affected by individual fruit characteristics and consumer preferences. Agricultural
23 producers concentrating on the fresh fruit market employ cultural practices that tend to thin out
24 the fruit to encourage a larger size for the remaining crop. Fresh fruit producers must be quality-
25 conscious and, typically, they will incur higher cultural costs than producers growing fruit for the
26 processor market. Some producers conduct a combination operation and grow fruit for both the
27 fresh and processing markets. For example, producers in Lake and Mendocino Counties may
28 raise Bartlett pears for the processing market and Bosc or D'Anjou pears for the fresh market;
29 fresh fruit that does not meet grading requirements for fresh fruit may be sold to the processing
30 market.

31 As part of the appraisal process, an analysis should be made of the orchard and vineyard
32 production history for a sufficient time period (usually three to seven years), the type of
33 production, and the method of marketing. The best source of information about grower
34 production is usually the grower; information is also obtainable from packers and shippers who
35 maintain records that indicate the variety, size, price, quantity, and quality of fruit packed and
36 shipped. In addition, the warehouse records indicate the volume of culled fruit and reveal
37 variations in production trends.

1 Some fruits are presold with prices negotiated prior to or during the harvest season with price
2 modifications for differences in quality and size. Producers may be subject to considerable price
3 fluctuations during the harvest season.

4 **COMPETITION**

5 Increasingly, California agriculture is competing for a market share in the global economy.
6 During the past two decades, competition has broadened from agricultural regions within the
7 United States only to worldwide competition. Major commodities including fresh fruits, table
8 grapes, cotton, almonds, rice, strawberries, lettuce, beef production, fresh vegetables, and the
9 wine industry have experienced strong foreign competition and widely fluctuating profits.
10 Competitive market forces cause continual shifts in the levels of commodities available, affect the
11 levels of demand for those commodities, and, ultimately, influence commodity prices. By
12 recognizing changes in the competitive market environment and making the same market
13 projections as buyers and sellers of agricultural property, the appraiser can avoid capitalizing
14 unrealistic income estimates into unrealistic market value conclusions.

15 **TREE AND VINE SPACING**

16 Tree spacing has changed during the past decade; closer plantings are now typical for certain
17 varieties. However, most plantings are still based upon established tree patterns that consist of
18 square, double, and triangle plantings. Occasionally, trees are interplanted (quadruple plantings)
19 between two rows of a standard pattern. However, the interplants must be removed before the
20 orchard becomes crowded and causes trees to suffer from stunted growth. The example below
21 illustrates the general pattern for planting and subsequent removal of trees.

DOUBLE PLANT

QUADRUPLE PLANT

X - Standard Trees

X - Standard Trees

O - Additional Trees (Removed Later)

O - 1st Removal

T - 2nd Removal

X X X X

X O X O X O X

O O O

O T O T O T O

X X X X

X O X O X O X

O O O

O T O T O T O

X X X X

X O X O X O X

22
23 Frequently, plantings consist of different tree varieties to obtain superior pollination which results
24 in increased production. For example, Carmel and Mission almonds are planted together with one

1 variety acting as a pollinator for the other. Different varieties should not be planted together
2 unless they have compatible cultural practices.

3 **APPROACHES TO VALUE**

4 The three approaches to value may be used in the appraisal of orchards and vineyards; however,
5 the most appropriate approach depends on the stage of plant development and the sufficiency of
6 data (sales, incomes, expenses, rents) available. If the orchard or vineyard is still in the immature
7 or exempt stage, the cost approach may be beneficial because adequate cost data should be readily
8 available and could be related to the property. If trees and vines are producing a crop that covers
9 their cultural and harvesting costs (break-even point), sufficient data should be available for the
10 application of the income or comparative sales approaches. If orchards and vineyards are in
11 decline, the comparative sales approach can be used to establish the land value and then adjusted
12 for the cost to remove the old trees and vines. Lack of sales data, cost, or income and expense
13 information may restrict reliability of any of the approaches to value

14 **COMPARATIVE SALES APPROACH**

15 In the appraisal of orchards and vineyards, the comparative sales approach is the most widely used
16 method. The comparable sales selected must be similar in physical characteristics (soil class,
17 commodity type, size, age, condition, irrigation, rootstock, frost protection) to the subject
18 property. Due to the numerous possible differences among properties, a careful analysis must be
19 made of all similarities and dissimilarities to establish comparability. Frequently, the property may
20 be planted in combinations of varieties dissimilar from the plantings of the comparable sales. A
21 possible solution to this problem may be found by individually appraising the various commodities
22 and summing their collective value. To establish the value of the separate commodity types,
23 available market sales data could be arrayed according to the age, acreage, production level, and
24 cash equivalent selling price for each commodity. The price should reflect the portion of the sale
25 price attributable to the trees or vines on a per acre basis. The following illustration demonstrates
26 how sales information after deducting land and nonliving improvements may be arrayed:

Crop	Age	Acres	Cash Price	Per Acre Production (Tons)	Price Per Acre	Price Per Unit (Tons)
Peaches, Cling	5	10	\$80,000	11	\$8,000	\$727
	6	15	\$120,000	12	\$8,000	\$666
	7	20	\$150,000	14	\$7,500	\$535
	10	20	\$180,000	18	\$82,000	\$500
	15	15	\$120,000	18	\$8,000	\$445
Almonds	5	10	\$60,000	0.3	\$6,000	\$1420,000
	10	20	\$114,000	0.4	\$5,700	\$14,250
	20	20	\$114,000	0.5	\$5,700	\$11,400
	15	40	\$240,000	0.5	\$6,000	\$12,000
Walnuts	10	15	\$112,500	1.4	\$7,500	\$5,357
	20	15	\$112,500	1.8	\$7,500	\$4,167
	40	20	\$134,000	2.0	\$6,700	\$3,350
	40	20	\$140,000	2.0	\$7,000	\$3,500

1
 2 Using information from the above chart, the value of the trees and vines for a given subject
 3 property can be estimated as follows:

Subunit	Variety	Age	Per Acre Value/ Production	Per Acre Value/ Comparison	Subject Acres	Per Acre Value	Total Living Improvements
1	Peaches	9	\$7,600	\$7,800	15	\$7,800	\$117,000
2	Almonds	12	\$5,500	\$5,700	20	\$5,600	\$112,000
3	Walnuts	20	\$7,500	\$7,500	16	\$7,500	\$120,000

4
 5 The value of land may be established by comparison with comparable parcels that have recently
 6 sold. The value of trees and vines can usually be accurately estimated by the cost approach.
 7 Value estimates based on comparison of total property units (land and improvements) are
 8 preferable to the technique illustrated above, but in the event sufficient sales data are not
 9 available, the above technique may be employed.

1 **COST APPROACH**

2 The cost approach is particularly useful in the appraisal of developing orchards and vineyards
3 where the value of the trees and vines, along with other improvements (land preparation costs,
4 cultural costs, irrigation systems), is added to the land value. The land value is established by
5 comparison with recent sales of similar vacant land acreages.

6 The cost approach has limited application in the appraisal of mature orchards and vineyards
7 because development costs do not always accurately reflect the market value of a property. A
8 vineyard developed on poor Class IV soils would reflect an erroneously high value when
9 compared to another recently developed vineyard on Class I soils. The development costs for
10 both vineyards may be quite similar, but the actual market value of the two vineyards may be
11 substantially different. Furthermore, the cost approach does not differentiate between market
12 values for different varieties of the same commodity. For example, the cost to develop a vineyard
13 to white Riesling grapes may be very similar to the cost to develop a vineyard to Chardonnay
14 grapes, but the commodity prices received for the grapes will reflect considerably different values.
15 From a practical standpoint, the cost approach should only be undertaken for the valuation of
16 young orchards or vineyards which are no longer exempt but that have not reached maturity.

17 **INCOME APPROACH**

18 The income approach may be effectively used in the appraisal of mature orchards and vineyards,
19 but its application will be somewhat more complex than typical agricultural properties because
20 permanent plantings (trees and vines) are considered to be depreciating or wasting assets. While
21 the above statement is correct from a physical standpoint, active market participants may not
22 consider permanent plantings as depreciating in value or as wasting assets. Typically, income,
23 expense, and yield rate levels can be found. A discussion of how these components relate to
24 orchards and vineyards follows.

25 **Income Analysis**

26 **Owner-Operator Income and Expenses**

27 It is difficult to properly analyze the income and expense information for an owner-operated
28 orchard or vineyard, especially if the subject is planted to several commodities with differing ages.
29 The preferred method would be to base income estimates on current rental, lease, or share-crop
30 agreements.

31 When dealing with tree and vine production, caution should be exercised regarding the
32 relationship between average production, average price levels, and average gross income.
33 Assume a property has a seven-year average production of 8.79 tons per acre and a seven-year
34 average price of \$144 per ton. By combining these two figures, an overall average return of
35 \$1,265 per acre is indicated. However, this figure is not a reliable indicator of the present or
36 future income potential of the property because it is derived from a seven-year production history
37 with increasing production and decreasing commodity prices.

1 A more appropriate way to analyze gross income would be to ascertain the average gross income
2 for the last three to four years, or, alternatively, determine the average tonnage for the last three
3 to four years, then multiply this value by the average commodity price. However, an average
4 income estimate derived from past production and commodity prices is only one indicator of
5 potential future income; all factors with a pronounced effect upon the future income stream must
6 be considered.

7 Once the gross income is estimated, expenses must be deducted to establish the net income
8 attributable to the orchard or vineyard. Numerous expenses are incurred during the growing
9 season for trees and vines including land preparation, pruning, spraying, disking, fertilizing, brush
10 removal, irrigation, and harvesting. Expenses may vary annually, so the level of anticipated
11 expenses must be estimated based upon typical operations for the area, just as the potential future
12 income stream is estimated.

13 In most orchards and vineyards, the majority of expenses occur before harvest, and a large
14 percentage of fixed and cultural expenses are incurred regardless of whether there is a harvestable
15 crop. While some expenses remain fixed, other expenses (harvesting, hauling, processing,
16 packing, shipping) vary in direct proportion to production levels.

17 Occasionally, an orchard or vineyard may appear to produce modest amounts of income in
18 relation to the total improvements. This situation is most likely to occur with an immature
19 orchard or vineyard equipped with an expensive irrigation and frost control system. In this
20 instance, the cost or comparative sale approaches should be utilized, and if the income approach is
21 undertaken, the capitalization rate used should recognize and reflect this condition.

22 **Rental Income**

23 Rental information must be carefully analyzed because many leases are not created on clear cash
24 rental payments. Frequently, leases are "hybrids" and incorporate terms and conditions from both
25 cash and share-crop type agreements. A landlord may receive a portion of the agreement in cash
26 and a percentage of the crop while contributing to the cultural, harvesting, and marketing costs.

27 An analysis must be made of the relationships between production levels, commodity prices, and
28 annual gross income. A weighted average technique to project future income may result in
29 distorted estimates if a recent commodity price received is not typical but is heavily weighted. In
30 such an instance, a short-term trend may create an unrealistic indicator of a future price. This
31 point is particularly important for properties that are price-sensitive to production and marketing
32 conditions.

33 **Economic Life**

34 The economic life for orchards and vineyards is that period of time during which the net income
35 provides an economic yield on the full value of the land and improvements. Advances in cultural
36 practices have extended the remaining economic life (REL) for many orchards and vineyards. The
37 best source of information regarding the REL can be obtained from the producer, packers,
38 shippers, and agricultural extension offices.

1 The yield rate derived from sales of comparable land can be used in estimating the REL of the
2 improvements. The example below illustrates a straight-line declining income premise.

3 An orchard sells for \$4,600 per acre and comparable bare land sales are \$4,000 per acre. An
4 analysis of the sales indicates a 6 percent yield rate with net income to the orchard after property
5 taxes of \$365 per acre.

Sale Price	\$4,600 per acre
Land Price	\$4,000 per acre
Tree Price	\$600 per acre
Net Income to Orchard	\$365 per acre
Less Land Charge ($\$4,000 \times .06$)	<u>\$240</u> per acre
Income Imputable to Trees	<u>\$125</u> per acre

6
7 The \$125 per acre income to trees represents the income imputable to a yield on the tree
8 investment (return) and the amount sufficient for recapture of the investment. When the income is
9 divided by the tree price, the result is 20.8 percent, which is the yield and recapture for the trees.
10 With a yield rate of 6 percent, the derived recapture rate is (20.8 percent - 6 percent) or 14.8
11 percent. This suggests that potential purchasers anticipate a REL for the trees of approximately
12 seven years ($1 \div 14.8 \text{ percent} = 7$). This REL figure may be used for the appraisal of similar
13 properties; however, the life estimate should be used in conjunction with the premise from which
14 it was derived. The REL of the improvements can also be estimated by using the constant income
15 premise: $\$600 \text{ divided by } \$125 = 4.8$; then finding this number in the PW1/P table at 6 percent,
16 we find the term is six years, one year less than the straight-line declining premise.

17 Because the yield rate used in this calculation of REL is derived from bare land sales and bare land
18 incomes, this technique can only be used when the production of annual crops and orchard crops
19 are equal and alternative uses for the land. This conditions must be met before the bare land rate
20 is applicable to orchard properties.

21 Return "On" Improvements

22 A property owner is entitled to a "fair" return on the value of nonliving improvements. A "fair"
23 rate of return is a market-derived yield rate.

24 One method of finding a market yield rate for nonliving improvements is to extract the rate from
25 sales of similar agricultural properties. This method presumes that the yield rate for
26 improvements is identical to the yield rate for the entire property. If the appraiser determines that
27 this total property rate method is not appropriate for the nonliving improvements, some other
28 method consistent with generally accepted principles of appraisal may be employed.

29 The second element needed to determine the return *on* nonliving improvements is the current
30 market value of the improvements. This value is most commonly determined by the cost

1 approach (replacement cost new less depreciation (RCNLD)) but may be derived through market
2 analysis where applicable data are available. Once these two components (yield rate and current
3 market value) are known, the return *on* improvements is computed by multiplying value by the
4 yield rate.

5 **Return "Of" Improvements**

6 In addition to a fair return *on* an investment, the property owner must earn a sufficient amount to
7 provide a return *of* the current market value of wasting assets. There are at least four potential
8 methods of applying this technique.

- 9 • Provide for straight-line recovery of value by using replacement cost new (RCN) of the
10 improvement and its estimated economic life when new.
- 11 • Provide for straight-line recovery of value by using the estimated current value of the
12 improvement (hereafter referred to as RCNLD, although any market-based method may be
13 used) and its estimated remaining economic life (REL).
- 14 • Use a sinking fund technique based on RCN and economic life when new (the rate of return is
15 the same rate used for return on the investment).
- 16 • Use a sinking fund technique based on RCNLD and REL (the rate of return is the same rate
17 used for return on the investment).

18 Advantages of using a straight-line method (either RCN or RCNLD) include: (1) it is simple to
19 use, and (2) no adjustment is required when the yield rate changes. Some disadvantages are: (1) it
20 overstates true capital recovery allowances because it presumes that the owner will set aside cash
21 for replacement of the asset in a noninterest-bearing fund, and (2) the straight-line method results
22 in different residual income to the land depending on the current market value of the
23 improvements.

24 The primary advantages of using a sinking fund technique to recapture an investment for nonliving
25 agricultural improvements are that it is consistent with the principles of discounted cash flow (see
26 Assessors' Handbook Section 501) and, when used properly, it avoids the problem of income to
27 land changing due to differing estimates of improvement values. Accordingly, the appraiser
28 should use a sinking fund ~~method~~-technique to account for return of nonliving improvements.

29 The RCN and RCNLD methods should yield the same result if applied properly, so either method
30 is acceptable.

31 A potential advantage of the RCN method is that the same percentage of RCN for any given
32 estimated economic life can be applied to all properties with the same life and yield rate (the rate
33 used for return *on* the property). For example, if the yield rate is 4 percent, the tax rate is 1
34 percent, and the economic life is 20 years, the annual amount is calculated by multiplying the RCN

1 by .0802 (.0302 sinking fund factor and .05 yield and taxes).²⁰ The same percent can be applied to
2 all nonliving improvements that have a 20 year total life and a 5 percent yield and tax rate. A
3 second advantage is that there is usually (but not always) less controversy or uncertainty over the
4 probable economic life of a new improvement as compared to the remaining economic life of an
5 aged improvement. These advantages are minor in many cases, so the appraiser should select
6 either the RCN or RCNLD depending on the reliability of the available data.

7 **Deriving Yield Rates**

8 Yield rates are most reliable if derived from market transactions, and each orchard or vineyard
9 sale should be analyzed to extract a rate. The method of extraction should be appropriate for the
10 shape and duration of the projected income stream.

11 **Income Stream Shape**

12 The income stream shape for an orchard or vineyard will vary during its economic life according
13 to the stage of plant development. The plant life cycle can be divided into three stages:
14 immaturity, maturity, and declining. The income stream associated with immaturity is generally
15 increasing, income during maturity should be level or curvilinear, and income will decrease
16 annually during decline.

17 During periods of increasing production, an analysis of comparable orchards and vineyards in the
18 area should be conducted to determine typical production and expense levels for the various ages
19 of trees and vines. Production and expense levels should always be compared against comparable
20 orchards and vineyards at the same stage of their economic life. Part II of this manualhandbook
21 gives details and examples of processing this type of income stream.

22 **Capitalized Earning Ability of Immature Orchards and Vineyards**

23 If an orchard or vineyard represents the highest and best use of a property, the value of the
24 immature orchard or vineyard is determined by the present worth of all future net income.
25 However, to handle the income properly, different income capitalization premises must be utilized
26 during each of the threefour stages. The following steps will indicate the value of an immature
27 orchard or vineyard:

- 28 1. Estimate the net income annually during the inclining income-producing stage, then
29 discount each year's income back to the current lien date using the present worth of one
30 factors. The discounted income totals indicate the inclining income stream value.
- 31 2. Estimate the net income earned during the first year of the level income-producing stage.
32 Capitalize this amount using a present worth of one per period for the anticipated number
33 of years in the level income-producing stage. This amount is then discounted using a
34 present worth of one factor for the number of years separating the beginning of the level
35 income stage from the lien date.

²⁰ Factor .0802 is the same as the installment to amortize factor at 5 percent.

1 3. Estimate the net income earned during the declining income stream using the declining
2 income premise. Discount this amount back to the lien date using the present worth of
3 one factor. The declining income stream will terminate when the trees or vines become
4 uneconomical and are pulled.

5 4. Sum the values from the first three steps to determine the total property value.

6 All four steps may not be required for every appraisal. The declining income premise might be
7 appropriate for the mature period of short-lived trees. In that instance, step two would be
8 unnecessary. Conversely, the level income stream might be exceptionally long for some varieties,
9 and, in this situation, there is less need to make a highly detailed analysis of the declining portion
10 of the income stream because the value contribution is negligible.

11 **Capitalized Earning Ability of Mature Orchards and Vineyards**

12 The comparative sales approach is the preferred method of appraising a mature orchard or
13 vineyard. However, the income approach may provide a check for the sales comparison approach
14 and, in situations with limited market or cost data, may be the only reliable approach available.
15 The same valuation approach is employed with mature orchards and vineyards, except that step
16 one (as described above) is not required because there is no inclining income stage.

17 Numerous trees and vines have relatively short economic lives and do not have a prominent level
18 income stream stage. The following example illustrates how an income stream may be capitalized
19 using a tree or vine residual method:

1 COMPUTATION:

2 Economic Rent @ 30% Share
 3 40 Acres x 2,000 Pounds x 30% x \$0.65 Per Pound \$15,600

4
5 Expenses

6 Management @ 5%

7 Maintenance @ 1%

8 Insurance @ 1%

9 7% x \$15,600 1,092

10 Net Income Before Property Taxes and Recapture \$14,508

11

12 Charge to Land and Nonliving Improvements

13 Land 40 Acres @ \$1,600 x (6%Y + 1%T) \$4,480

14 Irrigation System \$12,000 x .080586* 967

15 (*installment to amortize 7% @ 30 yrs)

16 Shed \$4,000 x .075009* 300

17 (*installment to amortize 7% @ 40 yrs)

18 5,747

19 Net to Trees Before Recapture and Property Tax \$8,761

20 CAPITALIZED TREE VALUE (12 Year REL)

21 \$8,761 x 7.942686* \$69,586

22 (*PW of \$1/period 7% @ 12 yrs)

23 SUMMARY

24 Tree Value \$69,586

25 Land and Well Value 64,700

26 Shed 4,000

27 Irrigation System 12,000

28 Total Property \$150,286

29 PER ACRE VALUE - LAND AND TREES ONLY

30 Land \$64,000 (Excluding Well)

31 Trees 69,586

32 \$133,586 ÷ 40 Acres \$3,340

33

34 NOTE: Yield rate taken from sales of similar properties.

35

1 RECONCILIATION OF THE APPROACHES

2 The choice of approach depends upon the development stage for the orchards and vineyards and
3 the market data available. The comparative sales approach is most frequently used, especially
4 when sufficient recent relevant sales are available for analysis. The cost approach is used
5 primarily for developing orchards and vineyards. It indicates the value of the trees and vines,
6 along with other improvements, and adds these totals to the indicated land value obtained through
7 a comparison of vacant land sales similar to the property. The income approach is relevant but
8 more complex in its application because permanent plantings are generally considered
9 depreciating or wasting assets, and a provision for their recapture must be considered. The
10 application of all three approaches is not always practical, or even desirable, in every orchard or
11 vineyard appraisal.

CHAPTER 8: APPRAISAL OF DAIRY PROPERTY

Special considerations in the appraisal of dairy farms include the soils, improvements which affect the type of dairy operation, feed balance, and marketing of dairy products. As with other areas of productive agriculture, the soils provide an indication of the property's potential and contribute significantly to the total unit value. Dairy improvements present unique valuation problems because of their specialized nature and high improvement to land value ratios. Moreover, the type of operation and selection of feeding program are heavily influenced by the improvements and the amount of automation contained in the structures. Additionally, governmental restrictions now play a role in planning, design, and construction. A dairy operation cannot raise more animals than the facilities can reasonably support, but most dairies do raise more animals than economically feasible by purchasing outside feed to supplement dairy raised crops. The last major factor affecting the value of any dairy operation is a reliable market for the milk products.

In order to understand the market forces that affect the value of dairy properties, a knowledge of the milk market and marketing orders is required. Milk products are marketed through dairy cooperatives which receive the milk and attempt to sell as much of the product as possible for Grade A or Class 1 use. Milk products are broken down into Class 1, Class 2, Class 3, Class 4A, and Class 4B. The prices (and profits) received by the dairy cooperatives decrease as milk is sold in the lower categories. All receipts from milk sales are placed into a pool and distributed to the dairy producers based on their production and quotas. Obviously, the more milk sold as Class I for bottling and human consumption, the greater the profits to the dairy producers.

Quota is important to dairy operators because they receive more for milk with quota than for nonquota milk. Over the course of a fiscal year, this can equate to significant additional earnings. Quota has separate value and can be bought and sold on the open market by dairy producers. However, due to problems encountered in the 1980's with the sale of quota, certain restrictions are now applied. Once a dairy producer buys or sells quota, the producer is restricted from additional purchases or sales for a two-year period. Quota value is not included in the appraisal of the taxable real property.

A basic starting point for any dairy appraisal is a thorough physical inspection of the property noting all improvements and their locations, soil types, and field boundaries. Care must be exercised in the classification of equipment as real or personal property, and valuation efforts with auditor appraisers should be coordinated to prevent the possibility of double assessments or escapes on equipment items. When a total property appraisal is made involving both real and personal property, the possibility of double assessment is remote. However, escapes, double assessments, and assessments of equipment that no longer exists may occur in future years due to misunderstandings and errors in the annual property statement process. Thus, it is important that both the dairy owner and the assessor's staff have a clear understanding as to which equipment is included in the real property appraisal versus the equipment that is appraised annually by the audit appraisal staff.

APPROACHES TO VALUE

COST APPROACH

When used in conjunction with the comparative sales approach, the cost approach may be used for making detailed analyses of dairy improvements and estimating accrued depreciation from physical deterioration and functional or external obsolescence. This helps in allocating value for the various dairy farm improvements for the total appraisal. Dairy farm development costs may be estimated by the cost approach; this involves estimating the cost of constructing the improvements to known land values.

In estimating the replacement cost new of buildings, fences, water systems, etc., local construction cost information should be used. When estimating accrued depreciation, the appraiser must be careful to consider all forms of depreciation—functional and external obsolescence as well as physical deterioration. Many older dairy improvements have functional obsolescence. For example, a walk-thru milk barn is less efficient than a modern herringbone or sawtooth style improvement. External obsolescence is the result of outside forces, and dairies near growing metropolitan areas are particularly susceptible to this type of depreciation. In addition, environmental regulations have impacted on many cultural practices forcing producers to change long-standing methods, which in turn creates obsolescence in existing improvements.

In the event the cost approach is used for the appraisal of dairy properties, all forms of accrued depreciation (physical deterioration, functional and external obsolescence) should be carefully considered. To illustrate, a walk-through milk barn is less efficient than a herringbone style milking facility even though they may be quite similar in initial cost.

INCOME APPROACH

The income approach should be considered in the appraisal of dairy farms and is especially useful when sufficient rental or lease information provides reliable data for the application of this technique. An income approach based on rental or lease data usually provide the most reliable value indication because this information relates directly to the property, while owner-operator income and expense information is influenced by management levels and is more difficult to process to a net income figure. The income to be capitalized, of course, is the net income attributable to the real property. Capitalization rates developed from rental or lease data should not be used to capitalize income from owner-operators.

Although a land residual technique can be used in the valuation of most agricultural properties, the building residual technique is more appropriate for the valuation of dairy properties because the improvement value constitutes a large percentage of the total property value. In instances where the dairy has a limited economic life because of reasonably foreseeable land use changes, a property reversion technique would be an appropriate form of capitalization.

1 The capitalization rate used in the income approach should be derived from the sales of
2 comparable dairy properties. If such sales data are not available, a capitalization rate can be
3 developed by the band-of-investment technique.

4 The gross income estimate should represent the income generated from all sources, not limited to
5 the income generated by milk sales. Typical sources of income from dairy operations includes:

- 6 • Milk
- 7 • Sale of cull cows or calves
- 8 • Sale of surplus crops
- 9 • Excess land rental
- 10 • Fertilizer sales
- 11 • Breeding fees

12 Deductible expenses are those expenses necessary to maintain the income stream. Typical
13 expenses include:

- 14 • Feed
- 15 • Maintenance and insurance
- 16 • Supplies
- 17 • Salaries
- 18 • Management
- 19 • Utilities
- 20 • Breeding fees
- 21 • Veterinary expenses
- 22 • Livestock replacement
- 23 • Marketing and transportation

24 **COMPARATIVE SALES APPROACH**

25 When reliable market data are available, the comparative sales approach is the preferred valuation
26 technique for dairy properties. However, in many areas sales of dairy properties are rare. If the
27 comparative sales approach is to be used, all comparables must be of the same approximate size
28 and type of operation. To illustrate, a large, automated dairy operation that purchases the
29 majority of its feed should not be compared against a small family operation that raises most of its
30 feed. The property and all comparable sales should be producing for the same milk market (for
31 example, Class I liquid for human consumption), otherwise the quality of its milking facilities, its
32 levels of production, and its levels of profitability may be considerably different.

- 1 The sales data should be analyzed and several units of comparison developed if possible. Typical
- 2 units of comparison in the appraisal of dairy properties include overall sale price per acre
- 3 including buildings, equipment, and stock sales; price per milking head capacity; sale price per unit
- 4 of milk production; and gross or net rent multipliers.

CHAPTER 9: AGRICULTURAL LAND IN TRANSITION

GENERAL

Transitional properties are those undergoing change to a different highest and best use. They commonly consist of two types:

1. From one agricultural use (row crop) to a more profitable highest and best use (orchards and vineyards)
2. From agricultural to commercial, industrial, residential, or recreational uses

The appraisal of agricultural properties in transition to a different highest and best use as commercial or residential properties involves several special considerations including the property history, projected development time, interim use, and consistent future development costs.

A changing land use is generally driven by local or regional zoning, and the potential for a zoning change for the property is an essential consideration in determining a future highest and best use. The possible extension of infrastructure services to the property is also a major consideration. A knowledge of the area to correctly interpret future land trends as they relate to use and value is crucial.

Consideration must be given to a property's interim use during the development period because the interim use may provide some cash flow to offset costs until the highest and best use is achieved. Estimating the highest and best use of a transitional property is crucial in the valuation process, and all factors that may affect the eventual use should be considered. The development period must be calculated as accurately as possible because of the influence on interim value. To illustrate, agricultural land developed to citrus may have a value of \$10,000 per acre with no development potential; however, citrus land with development potential may be selling for \$100,000 per acre. The interim value of the transitional property should fall within this value range, and its final value would depend upon the length of time before it could be adapted to a different highest and best use.

A thorough analysis of projected development costs will determine the most appropriate development plan and will identify the development options that are expected to provide the greatest return to the land. Consistency of development must be applied as part of this process. Estimates of \$50,000 per finished lot for what was formerly agricultural land in an area where finished lots are selling for \$25,000 is not reasonable or supportable.

In some instances, value is created by a variation of an existing use rather than a complete change. To illustrate, an irrigation system is installed on a previously dry-farmed almond orchard. In this case, the present use is continued but enhanced through higher production, and a higher land value is imputed to the property if the increase in income exceeds the amount necessary to pay for the irrigation.

1 The initial problem in valuing transitional land is the determination that transitional pressures do
2 exist and are realistic. Some market forces are subtle and difficult to detect because they are
3 unaccompanied by signs of activity. Expectation of a future change influences property owners.
4 This occurs when urban encroachment migrates toward the location of agricultural land. Existing
5 cash flow may not change, but the land value, due to anticipated future benefits, may change
6 drastically. However, without recorded market activity the existence of transition and potential
7 value changes can only be inferred.

8 If the transition to a new use requires a change in zoning or other existing restriction, section
9 402.1 provides a rebuttable presumption that the restrictions will not be removed or substantially
10 modified in the foreseeable future. Subdivision (c) of section 402.1 provides a nonexclusive list of
11 grounds that may be used to rebut the presumption. Thus, the appraiser may not assume that
12 zoning or other restrictions will be changed unless there is reasonable evidence that such changes
13 are likely to be made.

14 VALUATION

15 COMPARATIVE SALES APPROACH

16 In general, the comparative sales approach is the most reliable approach to value transitional
17 properties. Two important factors must be considered in the selection of appropriate comparable
18 sales: size and time. Parcel size has a significant impact on potential value because of market
19 demand. To illustrate, a 25 acre parcel may have immediate development potential and,
20 consequently, would tend to command a higher unit value than a larger parcel that might have to
21 be developed in phases over a number of years. Time also has a significant impact on value
22 because a parcel with immediate development potential will command a higher value (present
23 dollars versus future dollars) than a parcel where development will have to be postponed.

24 When appraising an area in transition, an analysis of the degree to which recent sales have affected
25 land values should be completed. To illustrate, assume an area with rolling dry farmland had
26 sporadic sales five years ago with an indicated value of \$600 per acre. Four years ago, a section
27 of land sold for \$1,000 per acre and the buyer developed a deep well irrigation system, at
28 considerable expense, and planted orange trees. Since that time additional sales of sections and
29 half sections for citrus development have taken place at \$1,250 an acre. A total of 12 sales
30 covering 4,000 acres have occurred in the area. Suitable land available for development is
31 approximately 40,000 acres. Obviously, the land value has increased beyond the original value of
32 \$600 per acre five years ago.

33 Buyer motivation and actions indicate the area has been thoroughly analyzed regarding soil,
34 climate, and water conditions, and has been determined to be a prime area for citrus growing.
35 However, is there an appropriate size for an economic unit and a limit to the initial investment
36 buyers are willing to pay? Would typical purchasers pay \$1,250 per acre for two sections of land
37 or would they consider the purchase of sections or half sections at higher unit prices? These
38 smaller parcels may have a lower acquisition cost but may not constitute economic units that

1 allow for development of the required irrigation systems. A separate market for the smaller
2 parcels may develop that is restricted to the owners of adjacent parcels with existing irrigation
3 systems that could be expanded to include additional land.

4 Agricultural lands in transition are usually associated with radical changes in selling prices and
5 recent market trends. A reliance on the comparative sales approach to provide reliable estimates
6 of transitional land value is recommended because this method provides direct evidence of the
7 current value of anticipated future net benefits, regardless of how distant such benefits may occur.

8 **COST APPROACH**

9 The cost approach has little validity or applicability in the valuation of transitional properties
10 because most transitional properties suffer from economic and functional obsolescence. These
11 items of accrued depreciation are best measured by the comparative sales approach.

12 **INCOME APPROACH**

13 The income approach is frequently used to estimate the value of transitional land through
14 application of a discounted cash flow analysis (DCF) or subdivision analysis. This technique is
15 based on the assumption that present income is more desirable than future income and that market
16 participants prefer immediate cash returns over future income flows. DCF analyzes cash flow
17 projections for each period of time that the property is expected to produce income in order to
18 compute the present value of property assuming a certain rate of return. A DCF analysis requires
19 a number of assumptions regarding such factors as absorption rates, sales prices, development
20 costs, density, and appropriate discount rates. Absent sufficient comparable sales, a DCF analysis
21 may be completed, although it must be approached with caution. The final valuation is no better
22 than the data used; judgment errors regarding assumptions have a major impact on the final
23 estimate of value. For a more complete discussion of discounted cash flow analysis, refer to
24 Assessors' Handbook Section 501.

25 The following approach could be employed in instances where there is extensive knowledge of
26 impending special benefits but where no sales have yet occurred.²¹ Such a situation occurred in
27 areas of the Southern San Joaquin Valley where it was anticipated that irrigation water from the
28 California Aqueduct would soon be available for agricultural purposes. Well water contained
29 traces of boron which were harmful to most crops and precluded the development of available
30 land with good quality soils. In such instances the proper appraisal technique would be to
31 determine the sum of the capitalized value for all future net benefits under the existing use for the
32 remaining term of that use and the present worth of the capitalized value of all future net benefits
33 under the anticipated future use of the transitional land. However, the present worth of all
34 expenditures required to prepare the land for its future highest and best use must be deducted
35 Such costs might include land leveling, irrigation systems, and soil amendments. Questions
36 regarding the levels of net income and yield rates to be utilized can only be determined by

²¹ "Special benefits" refers to an increase in value of a parcel due to features of current or expected construction.

1 analyzing current market data since predictions of future trends are based on past and current
2 trends. The following example illustrates how to apply this approach.

3 **EXAMPLE**

Present Use (Dry Land Grain; Remaining Term is 5 Years)

Net Income = \$30 Per Acre Per Year

Present Worth of \$30 for 5 Years Discounted @ 7%

(6%Y + 1% T) = \$30 x 4.100

\$123

Future Use (Irrigated Crop Land, Perpetuity)

Net Income = \$100 Per Acre Per Year

Capitalized Value = \$100 ÷ 7% = \$1,428

Present Value of \$1,428 Discounted @ 7% for 5 Years =

\$1,428 x 0.7130

1,018

\$1,141

Minus the Present Worth of the Expenditure Needed to Develop
the Land to its Future Highest and Best Use:

Land Leveling @ \$200 Per Acre x 0.7130

- 142

Irrigation @ \$100 Per Acre x 0.7130

- 71

Total Transitional Value

\$928

4 **SUMMARY**

5 Transitional properties may include those parcels that are declining in value and use as well as
6 those parcels that are increasing in value and use. The concept of transitional properties is
7 generally associated with an increase in highest and best use along with property development;
8 however, transition is related to changes in the utility of property. In other words, transition
9 occurs because modern, different, superior, or inferior net benefits are anticipated through
10 modification of existing property uses.

11 Anticipated future net benefits may take the form of greater (or declining) annual revenues,
12 anticipated future lump sum payments (reversions), or anticipated flow of future amenities. These
13 benefits exist in the minds of active market participants who comprise the market for affected
14 properties.

15 Frequently, a change in property use or purpose of ownership is not readily apparent. Therefore,
16 it is exceedingly important to investigate buyer motivation. Frequently, this analysis discovers a
17 mixture of motives and an imbalance of market knowledge between buyers and sellers.

18 Since sales are frequently the first and only suggestion of the early stages of transition, the sales
19 comparison approach provides the most useful indicator of value in most instances.

PART II

**ASSESSMENT OF
OPEN-SPACE
PROPERTY**

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION.....	1
CHAPTER 2: VALUATION OF LAND.....	6
CAPITALIZATION PROCESS	6
INCOME ANALYSIS.....	6
<i>Highest and Best Use</i>	7
<i>Imputing Income</i>	9
<i>Estimating Agricultural Income</i>	10
<i>Income From Compatible Uses</i>	14
<i>Charges Against Real Property Gross Income</i>	19
CAPITALIZATION RATE DEVELOPMENT	26
<i>Interest Component</i>	27
<i>Risk Component</i>	28
<i>Tax Component</i>	31
VALUATION OF TRANSITIONAL LAND.....	32
VALUATION OF LAND SUBJECT TO SCENIC RESTRICTIONS OR OPEN-SPACE EASEMENTS	33
CHAPTER 3: VALUATION OF TREES, VINES, AND OTHER LIVING IMPROVEMENTS.....	34
ECONOMIC LIFE.....	35
DETERMINATION OF THE INCOME TO BE CAPITALIZED.....	35
<i>When the Restricted Property Consists of Land and Living Improvements</i>	35
<i>When the Restricted Property Consists of Land, Living Improvements, and Nonliving Improvements</i>	39
CAPITALIZATION PROCESS	39
<i>Methods of Capitalization</i>	39
<i>Capitalization Rate</i>	45
<i>Risk Component</i>	45
CHAPTER 4: VALUATION OF NONLIVING IMPROVEMENTS.....	47
CHAPTER 5: VALUATION OF RESIDENTIAL SITES	51
CHAPTER 6: VALUATION OF MINERAL DEPOSITS.....	54
CHAPTER 7: TOTAL PROPERTY VALUE.....	55
ALLOCATION OF VALUE	55
VALUATION OF NONRESTRICTED PORTIONS OF AGRICULTURAL UNITS.....	55
ASSESSMENT LIMITATIONS.....	56
CHAPTER 8: VALUATION OF LAND SUBJECT TO TERMINATING RESTRICTIONS	57
CHAPTER 9: CANCELLATION PROCEDURES.....	60

CHAPTER 10: VALUATION OF WILDLIFE HABITATS 61
 Valuation Procedures Under Section 423.7 61
 Valuation Procedures Under Section 423.8 62

CHAPTER 11: WETLANDS MITIGATION BANKING 63
 BACKGROUND 63
 ASSESSMENT ISSUES 66

CHAPTER 12: OPEN-SPACE APPRAISAL PROGRAM..... 69

CHAPTER 1: INTRODUCTION

1
2 In 1965 the Legislature enacted the California Land Conservation Act (Williamson Act) in an
3 effort to preserve agricultural lands for the production of food and fiber and to discourage
4 noncontiguous urban development. The law was an attempt to stop or at least to slow down the
5 increase in real property taxes on farmland by providing methods for restricting land use to
6 agricultural purposes. This attempt was reinforced in 1966 by legislation that established a
7 rebuttable presumption stating that certain enforceable government restrictions on land use are
8 presumed to continue in the predictable future and are presumed to affect value.¹

9 The original California Land Conservation Act of 1965 could not assure limitations on the
10 assessed value of land restricted to agricultural use because the Constitution required that
11 assessments be based upon market value. In the 1966 general election, the electorate approved a
12 constitutional amendment (now article XIII, section 8, of the Constitution) that enabled the
13 Legislature to prescribe assessment procedures not based upon market value for certain open-
14 space lands. The following year, the Legislature added sections 421, 422, and 423 to the
15 Revenue and Taxation Code to define open-space enforceable restrictions, to prohibit the use of
16 sales in the appraisal of land subject to these restrictions, and to require that open-space lands be
17 appraised on the basis of income. These sections were then amended (repealed and new versions
18 enacted) in 1969 to prescribe the method for determining the applicable capitalization rate, to
19 clarify procedures for the valuation of residential sites, and to specify that trees and vines be
20 valued in the same manner as land.

21 In 1973, further amendments to sections 421 and 422² added to the list of enforceable restrictions
22 certain wildlife habitat contracts, and added section 423.7 procedures for the valuation of lands
23 subject to such restrictions. Under section 423.7, lands subject to these wildlife habitat contracts
24 are not to be valued by the capitalization of income approach, but by a restricted comparative
25 sales method.

26 The Open-Space Easement Act of 1974 revised the procedures for the creation of open-space
27 easements and defined certain scenic restrictions as enforceable restrictions for assessment
28 purposes. Legislation in 1982³ modified section 421 to include as an enforceable restriction an
29 open-space easement granted to a regional park district, regional park and open-space district, or
30 regional open-space district.

31 There have been numerous legislative changes since 1978 in the assessment procedures applicable
32 to enforceably restricted properties. In January 1979, section 51283.1 was added to the
33 Government Code to provide for a determination of any additional deferred taxes due upon
34 cancellation of an open-space contract. However, section 51283.1 was repealed in August 1986.
35 In 1981, legislation added Government Code section 51282.1 which provided special one-time

¹ Revenue and Taxation Code section 402.1.

² All statutory section references are to the Revenue and Taxation Code unless otherwise designated.

³ Statutes of 1982, Chapter 71 (Assembly Bill 597).

1 cancellation procedures for open-space contracts,⁴ and set forth certain conditions for approval of
2 a petition for cancellation. Although this section was automatically repealed January 1, 1983,
3 Government Code section 51282, which was amended by this legislation, set forth stringent
4 conditions for the cancellation of open-space contracts. Sections 51231 and 51238 of the
5 Government Code were also amended in 1981⁵ to include agricultural laborer housing as a
6 compatible use for enforceably restricted lands. As a result of this and further legislation in 1985,
7 agricultural labor housing is now treated the same as other residences located on open-space lands
8 (section 428).

9 Section 423, which prescribes factors to be considered in valuing restricted property, has also
10 been periodically modified. Subdivision (a)(1) now requires reference to actual rents for similar
11 properties when determining cash rents for restricted properties, and subdivision (a)(3) has
12 eliminated the six-year maximum period for crop rotation. Subdivision (d) was amended in 1987
13 to provide that, unless either party to the open-space contract prohibits it, the restricted value
14 determined by the capitalization of income method will not exceed the lesser of either the current
15 fair market value or the factored base year value of the property. It also authorizes the assessor
16 to charge up to \$20 per parcel for determining the 1975 base year value of a restricted property.
17 Subdivision (e) provides that, if the contract between the landowner and the city or county so
18 states, nonliving improvements which contribute to land income shall be valued in the same
19 manner as the enforceably restricted land. Also in 1981, technical revisions were made to section
20 423 to accommodate the mandated change to a 100 percent assessment ratio.⁶

21 When article XIII A was first implemented, its base year concept was applied to open-space
22 properties. However, in July 1979, section 52(a) was added returning enforceably restricted
23 properties to the valuation procedures in effect prior to the passage of article XIII A. Article
24 XIII A is now applied only when the factored base year value is the lowest of several values.

25 Effective January 1, 1981, section 423.3 was added⁷ allowing cities or counties to assess certain
26 categories of enforceably restricted lands at the lower of their current restricted value or a
27 percentage of their value determined pursuant to section 110.1 adjusted annually to a maximum of
28 2 percent for inflation. The application of section 423.3 has been affected by the 1987 changes to
29 section 423 which now provides for a three-part value comparison.

30 Substantial changes have been made to the provisions pertaining to the valuation of properties
31 subject to terminating restrictions, i.e., the contract subjecting the land to restriction will not be
32 renewed. Section 426, dealing with assessment of properties whose owners have filed notices of
33 nonrenewal, was revised in 1982 and 1984 to clarify valuation procedures during the period of
34 contract termination. In addition, the cancellation value of land subject to a Williamson Act

⁴ Statutes of 1981, Chapter 1095 (Assembly Bill 2074).

⁵ Statutes of 1980, Chapter 1219 (Senate Bill 1747).

⁶ Statutes of 1981, Chapter 261 (Assembly Bill 241).

⁷ Statutes of 1980, Chapter 1273 (Assembly Bill 2298).

1 contract was defined as the property's fair market value as though it were free of contractual
2 restrictions.⁸

3 The original Williamson Act provided simply that annexing cities would succeed to all rights and
4 duties of contracts executed by surrounding counties.⁹ However, in 1968 the Act was amended
5 to allow cities to protest the execution of contracts within one mile of their borders. Such
6 protests would then entitle the city to opt not to succeed to the contract in the event of an
7 annexation.¹⁰

8 These procedures were revisited by the Legislature in 1990.¹¹ This legislation prospectively
9 repealed the protest provisions, due to the general feeling that the one mile rule unfairly exempted
10 some landowners from the rigors of the cancellation process. Protests validly filed before
11 January 1, 1991 continue to afford a basis for contract termination by annexing cities. This
12 legislation also added two evidentiary presumptions which apply to evaluating protests filed
13 before January 1, 1991 which are intended to invalidate "late" and "blanket" protests.¹² This
14 section provides that a protest must have identified a specific contract and that it is presumed that
15 nearby cities received notice of impending contracts.

16 In 1994, legislation provided statewide standards for determining "compatible uses" allowed on
17 land subject to the Williamson Act.¹³ To summarize the compatible use principles, a compatible
18 use may generally not (1) harm soil fertility, (2) obstruct or displace potential agricultural
19 operations, or (3) induce nonagricultural development of surrounding enrolled lands. These
20 principles reinforce the original purpose of Williamson Act contracts to "preserve the maximum
21 amount of the limited supply of agricultural land." This legislation also provided alternative
22 standards for non-prime lands, mineral extraction, and grandfathering provisions for uses in place,
23 expressly guaranteed in individual contracts, or subject to pending applications prior to 1994.

24 Senate Bill 1534 of 1994 tightened restrictions regarding condemnation or public acquisition of
25 enrolled lands.¹⁴ The changes (1) clarify that contract termination through public acquisition is
26 appropriate only for publicly owned facilities and interests;¹⁵ (2) provide that the pre-existing
27 standards in Government Code section 51292 regarding prime land alternatives and inadequacy of
28 a purely cost based selection of agricultural preserve lands now require affirmation findings;
29 (3) require that lands resold by public entities be re-enrolled in the Act or an equivalent; and
30 (4) provide detailed notice to enable the monitoring of these provisions. A further related change
31 enacted in 1996 forbids the placement of enforceably restricted land in a redevelopment area.¹⁶

⁸ Statutes of 1987, Chapter 1308.

⁹ See historical notes to Government Code section 51243.

¹⁰ See 68 Ops Att'y Gen 204 (1985).

¹¹ Statutes of 1990, Chapter 841 (Assembly Bill 2764).

¹² Government Code section 51243.5.

¹³ Statutes of 1994, Chapter 1251 (Assembly Bill 2663). See Government Code section 51238.1.

¹⁴ Statutes of 1994, Chapter 1158 (Senate Bill 1534).

¹⁵ Government Code section 51290.5.

¹⁶ Statutes of 1996, Chapter 617 (Senate Bill 1566); Health and Safety Code section 33321.5.

1 In 1995 sections 421.5 and 422.5 were added to ~~provide definitions of pertinent Williamson Act~~
2 ~~terms~~ make section 423 applicable to agricultural conservation easements created pursuant to Civil
3 Code section 815.1. Section 421 was again amended in 1996 to add land restricted by a political
4 subdivision or a government entity for the benefit of wildlife, endangered species, or their habitats
5 to the meaning of "open-space land."¹⁷

6 Section 423.8 was added in 1996¹⁸ to provide that land restricted as a wildlife or endangered
7 species habitat by a local, state, or federal government entity shall, upon the request of the owner,
8 be enrolled in a wildlife habitat contract. In providing for such enrollment, this measure (1) made
9 these lands immune to the general requirement that at least 150 acres be under contract, and
10 (2) required that lands enrolled in a wildlife habitat contract be valued in accordance with section
11 402.1. Additionally, the legislation provided that any land eligible for existing open-space
12 valuation procedures, which had also been enrolled in a contract pursuant to the bill's provisions,
13 shall be assessed at the lower of the value determined under section 402.1 or the value determined
14 under the open-space valuation procedures.

15 Section 423.4¹⁹ was added in 1998 and has subsequently been referred to as the "Super
16 Williamson Act." The intent of this law is to provide greater protection for California's
17 agricultural lands by allowing greater tax benefits for farmland owners by authorizing the
18 conversion of the voluntary rolling 10-year Williamson Act contracts to rolling 20-year Farmland
19 Security Zone (FSZ) contracts at the request of the landowner and approval of the county.

20 In 2002, Revenue and Taxation Code section 421.5 was amended to clarify that, for purposes of
21 valuing open-space land subject to an enforceable restriction, the term "agricultural conservation
22 easement" has the same meaning as defined in section 10211 of the Public Resources Code.²⁰

23 Although there have been many significant revisions to open-space statutes since the initial
24 legislation, the foregoing is only a brief outline of these changes. The focus of this
25 manual handbook is on the application of current (mid-1997-2003) law in the appraisal process.

26 Further, while the manner in which the income method is applied to the valuation of restricted
27 properties other than wildlife habitats is described in sections 423 and 423.5, the law is neither
28 specific enough in its directives nor broad enough in scope to cover all aspects of the complex
29 appraisal problems involved. Elements of the capitalization process have been subject to various
30 interpretations, and the result has been wide variation in valuation procedures. This
31 manual handbook attempts to standardize valuation procedures for open-space land and to offer
32 solutions to problems in the appraisal of property subject to these restrictions. The solutions are
33 based upon analysis of current legislation and the application of appraisal principles.

¹⁷ Statutes of 1996, Chapter 997 (Senate Bill 1804).

¹⁸ Statutes of 1996, Chapter 997 (Senate Bill 1804).

¹⁹ Statutes of 1998, Chapter 353 (Senate Bill 1182). Section 423.4 references Government Code 51296, which was
repealed in 2001 to reformat its single section with 15 subdivisions into 15 separate sections (51296 - 51297.4)
without changing the statute's substance.

²⁰ Statutes of 2002, Chapter 616 (Senate Bill 1864).

1 This ~~manual~~handbook does not consider the valuation of restricted timberland, nor does it deal
2 with the appraisal of land subject to certain other types of restrictions, such as those imposed by
3 the California Coastal Zone Conservation Act. Its purpose is limited to the appraisal of properties
4 subject to enforceable restrictions created by the California Land Conservation Act and related
5 legislation as defined in sections 422 and 422.5.

CHAPTER 2: VALUATION OF LAND

1
2 Except for land under wildlife habitat and timberland contracts, the basic appraisal method
3 applicable to the valuation of open-space land subject to an enforceable restriction is the income
4 approach to value. Section 423 states the factors to be considered in the valuation and provides
5 for an optional method of placing a ceiling upon the value to be enrolled. Under the limitations of
6 subdivision (d), unless a party to the contract expressly prohibits such a valuation, the current
7 taxable value cannot exceed the lowest of: (1) the current restricted value (determined via the
8 income method for open-space properties); (2) the current fair market value calculated pursuant
9 to section 110; or (3) the factored base year value, as if unrestricted, calculated pursuant to
10 section 110.1.

11 Section 423.3 provides for additional options for limiting the values of restricted properties.
12 This section provides that land may be valued no higher than a given percentage of its factored
13 base year value. Any city or county may decide at any time whether to implement section 423.3.

14 The specific application of procedures of sections 423(d) and 423.3 are described in more detail in
15 Part II, Chapter 7, Assessment Limitations.

CAPITALIZATION PROCESS

16
17 The income approach to value is explained in Assessors' Handbook Section 501, *Basic*
18 *Appraisal*. The capitalization of income process may be represented in its simplest form by the
19 mathematical formula $V = I/R$, or value equals income divided by capitalization rate. (The
20 capitalization rate is any rate used to convert income into value.) This formula is generally
21 applicable to the valuation of open-space lands because the net income attributable to the land
22 tends to be level and perpetual. To compute an estimate of land value (V) by the capitalization of
23 income method, the appraiser must estimate the net income attributable to the land (I) and
24 determine the appropriate capitalization rate (R).

25 There are instances where the shape of the income stream attributable to a particular parcel of
26 land, while level, is terminal and perhaps deferred. In these cases, present worth factors must be
27 used in the computation of value and $V = I \times F$ (value equals income ~~times~~ multiplied by factor).
28 These situations are rare; they are discussed in Part II, Chapter 2, Valuation of Transitional Land.

INCOME ANALYSIS

29
30 Section 423(a) sets the fundamental criteria for the determination of the income to be capitalized:

31 (1) Where sufficient rental information is available the income shall be fair rent
32 . . . based upon rent actually received . . . and upon typical rentals received in the
33 area for similar land in similar use, where the owner pays the property tax. Any
34 cash rent . . . considered . . . shall be the amount for which comparable lands have

1 been rented, determined by average rents paid to owners as evidenced by typical
 2 land leases in the area, giving recognition to the terms and conditions of the leases
 3 and the uses permitted within the leases and within the enforceable restrictions
 4 imposed.

5 (2) Where sufficient rental information is not available, the income shall be
 6 that which the land being valued reasonably can be expected to yield under prudent
 7 management and subject to applicable provisions under which the land is
 8 enforceably restricted. . . .

9 (3) . . . if the parties to an instrument which enforceably restricts the land
 10 stipulate therein an amount which constitutes the minimum annual income per acre
 11 to be capitalized, then the income to be capitalized shall not be less than the
 12 amount so stipulated.

13 For the purposes of this section, income shall be . . . the difference between
 14 revenue and expenditures. Revenue shall be the amount of money . . . which the
 15 land can be expected to yield to an owner-operator annually on the average from
 16 any use of the land permitted under the terms by which the land is enforceably
 17 restricted, . . . during a typical rotation period, . . .

18 . . . Those expenditures to be charged against revenue shall be only those which
 19 are ordinary and necessary in the production and maintenance of the revenue for
 20 that period. . . When the income used is from operating the land being valued or
 21 from operating comparable land, amounts shall be excluded from the income to
 22 provide a fair return on capital investment in operating assets other than the land,
 23 to amortize depreciable property, and to fairly compensate the owner-operator for
 24 his operating and managing services.

25 This provision makes it clear that the income to be capitalized is the economic net income
 26 attributable to the land determined, whenever possible, by the analysis of rents received in the area
 27 for similar lands in similar use. The "net" income is income received before deducting property
 28 taxes as an expense. To determine net income, the appraiser must estimate the future gross
 29 income the land can be expected to produce and subtract the allowable expenses (except property
 30 taxes) necessary to maintain this income. The "gross" income is primarily from agricultural
 31 production, but it should also include income from any compatible uses actually occurring, such
 32 as lease payments for oil or gas exploration rights, communication facility sites, and recreational
 33 uses such as hunting or fishing. There are no limits placed upon the income to be capitalized
 34 unless the contract contains a provision establishing a minimum annual income per acre.

35 **HIGHEST AND BEST USE**

36 Property must be appraised on the basis of its use or uses. The fundamental legal principle to be
 37 followed when making market value appraisals is that all property is appraised at its highest and
 38 best use, based on market perceptions of its potential uses. Highest and best use is that use,

1 among the alternative uses that are physically practical, legally permissible, market supportable,
2 and most economically feasible, that produces the highest residual land value. *The Appraisal of*
3 *Real Estate* defines highest and best use as follows:

4 The reasonably probable and legal use of vacant land or improved property, which
5 is physically possible, appropriately supported, financially feasible, and that results
6 in the highest value.²¹

7 Assessors' Handbook Section 501, Chapter 4, provides a discussion on highest and best use. In
8 that discussion, descriptions of the concepts and terms related to highest and best use, such as
9 legally permissible, financially feasible or probable, and most productive, are set forth, along with
10 the basic criteria for dealing with certain government restrictions on use.

11 In the determination of an open-space property's restricted value, section 430 provides a special
12 statutory scheme for the application of the highest and best use concept. This section states:

13 There shall be a rebuttable presumption that the present use of open-space land
14 which is enforceably restricted and devoted to agricultural use is its highest and
15 best agricultural use.

16 Based on this presumption, the present use of the land and the income generated by this use must
17 be considered appropriate for purposes of determining the property's restricted value, unless the
18 appraiser can demonstrate otherwise. To rebut the presumption the appraiser must establish by
19 substantial evidence that a prudent owner would utilize the land for some other use, even though
20 the present owner has not done so. The appraiser must also demonstrate that the alternative use
21 is physically practical, legally permissible, economically feasible, and market supportable.

22 In calculating the economic feasibility of an alternative use, the analysis should include new and/or
23 additional costs. Examples of the types of costs that need to be included in such an analysis
24 include, but are not limited to:

- 25 • The cost of changing the commodity produced.
- 26 • The cost of new infrastructure requirements to produce the new commodity.
- 27 • New or additional production costs.
- 28 • Income loss during the conversion period. (This is especially important with conversion to
29 perennial crops.)
- 30 • The cost and availability of new labor/expertise needs.

31 In evaluating the market supportability of an alternative use, the analysis should include the long-
32 term economic trends of both the existing commodity and the proposed alternative.

33

²¹ *The Appraisal of Real Estate*, 11th Edition, Appraisal Institute, (Chicago, 1996), p. 50.

1 Under what circumstances should the appraiser attempt to rebut the presumption that a property's
2 present use is its highest and best use (i.e., attempt to prove that prudent management would
3 devote the property to some other use other than the present use)? Each case must be judged on
4 its own facts, but at a minimum, the following basic conditions must be present:

- 5 • The other use must be compatible with the agricultural uses permitted under the terms of
6 the contract.
- 7 • The use must be common or general for comparable properties.
- 8 • The use must increase the total economic return of the property.

9 Generally, the appraiser should analyze the production capability of the land in light of its present
10 stage of development. It is not advisable to consider a use that is experimental in nature or one
11 that would require extensive property development unless it is reasonably certain that a permanent
12 change in use will take place. Where land is scheduled for development, or a future change in its
13 highest and best use is anticipated, it can be valued as transitional land (see Part II, Chapter 2,
14 Valuation of Transitional Land).

15 The appraiser must bear in mind that oftentimes a property may have special limitations that make
16 it incapable of typical use. For instance, a condition of dense soil, alkali, or high water table could
17 relegate a property to a lesser use in an otherwise uniform area of row cropping. The converse
18 might also be true. An individual water supply could make a higher use available to one property
19 in an area of dry grain farming. The appraiser should carefully consider each property's
20 characteristics and its effects on potential use before imputing an alternative use to a property.

21 **IMPUTING INCOME**

22 When appraising unrestricted income-producing properties, an appraiser can estimate an
23 economic rent for a property not currently producing an income if it has income-producing
24 capabilities. Use of an imputed income in the capitalization process is an acceptable method for
25 estimating a property's value even though the income projection involves a degree of speculation
26 and risk, providing that accurate income and expense projections reflecting the owner or operator
27 expectations can be obtained or produced.

28 When appraising restricted properties by the capitalization of income method in accordance with
29 section 423, the same procedure should be applied. That is, the appraiser can estimate economic
30 rent for land not currently producing an income but having income-producing capabilities based
31 on the highest and best use available under the terms of the enforceable restriction. Even though
32 not presently capable of producing an income from uses to which it is restricted, land has value if
33 there is the reasonable possibility and future expectation of generating an income from such uses
34 in the future. Land with deferred future income potential may be classified as transitional land,
35 and the method of valuing such land is discussed in the section Valuation of Transitional Land.

36 However, an appraiser cannot arbitrarily impute a "reasonable" amount as income to a property
37 merely because there is insufficient rental information to estimate an economic income. The

1 appraiser must locate adequate and verifiable data upon which to base an estimate. The amount
2 of income imputed would also be subject to any contractual provision that stipulated a minimum
3 annual income to be capitalized.

4 **ESTIMATING AGRICULTURAL INCOME**

5 There are three basic methods for determining the economic income of a parcel to be valued
6 under the provisions of section 423: cash rental analysis, share rental analysis, and owner-
7 operator return analysis. Regardless of which method is used, the appraiser is attempting to
8 determine the most probable economic income for the subject property. Therefore, the appraiser
9 must be careful to restrict consideration to leases and analyses of properties that are comparable
10 to the subject property. In determining a property's comparability to the subject, the appraiser
11 should consider factors that tenants and landowners in the marketplace contemplate when
12 negotiating leases. Such factors would include, but are not limited to, soil quality, topography,
13 distance from markets, size, access, climatic conditions, production levels, water availability,
14 water cost, and water quantity. In analyzing leases, attention should be given to factors such as,
15 but not limited to, contract rent, rent concessions, length of lease, lessor/lessee division of
16 expenses, renewal options, escalation clauses, and permitted use of the property. Owners and
17 operators are encouraged to meet with the county assessor periodically to present and discuss
18 information relative to income, expenses, risks, and other relevant information.

19 **Cash Rental Analysis**

20 Where sufficient rental data are available, cash rental analysis is generally the simplest and most
21 accurate method for determining a property's economic rent. If the subject property and/or
22 similar properties are leased for cash, and these leases are recent and reflect an agricultural income
23 commensurate with the highest and best agricultural use of the property, then these cash rents are
24 the best indicators of the economic rent for the property. Cash rents usually require the fewest
25 adjustments when determining the net income attributable to the land, and they have the additional
26 advantage of being easily understood and explained.

27 Although cash rental agreements are typically straightforward and easily understood, the appraiser
28 should look beyond the cash rental amount and make certain that the terms and all information
29 that could affect the rent received by the property owner have been considered. For example,
30 many cash leases involve the guarantee of a water supply. Unlike cash leases without these
31 provisions, such guarantees have the effect of transferring a considerable part of the short-term
32 risk regarding water availability from the tenant to the property owner. Factors such as this are a
33 consideration in determining who bears risk, the tenant or the property owner, and hence in
34 deciding the appropriate risk component to be used in computing the restricted value.

35 Finally, events in recent years have made it evident that the appraiser needs to consider the
36 possibility of water shortages when determining a property's economic income. In areas that are
37 heavily dependent on surface water supplies, including imported water, agricultural land often
38 stands vacant during years in which water supplies are curtailed or reduced due to the effects of
39 drought or environmental demands. Under strict water allotments, it may be necessary to keep

1 row crop land fallow in order to provide an adequate water supply to trees and vines. Similar
2 consideration may apply in an area heavily dependent on ground water supplied during a drought
3 or overdraft condition. Where an adequate water supply is a concern, the appraiser must account
4 for the uncertainty either in the projected income stream or in the risk component added to the
5 capitalization rate. If the appraiser determines that the shortage is both regular and cyclical, then
6 an allowance can be made in the income stream projection. Otherwise, the risk of curtailed
7 production or income due to water shortages should be accounted for in the risk component.
8 This allowance should be made regardless of whether cash rental analysis, share rental analysis, or
9 owner-operator return analysis is used for estimating a property's economic income.

10 **Share Rental Analysis**

11 In many rural areas, cash rents are uncommon and share rental agreements predominate. In a
12 share rental agreement, the property owner receives a share of the production of each crop grown
13 during the term of the lease. The amount of the percentage share may vary according to the crop,
14 the area where it is grown, the land's capability, the cost and scarcity of water, and whether or not
15 the owner pays a portion of the expenses of producing the crop. The appraiser should determine
16 the percentage share applicable to the subject property based on market data derived from the
17 examination of comparable properties leased on a share rental basis.

18 In determining the gross income under a share rental agreement, the appraiser must estimate the
19 average production, the proper percentage share, the projected price for each crop grown, and,
20 where applicable, the owner's projected expenses. In determining what price should be used in
21 computing the gross return to the landowner, the local county agricultural commissioner's annual
22 tabulation of commodity prices is generally a good source of historical prices. However, these
23 prices usually reflect prices received at the packing house, and as such include picking, packing,
24 and hauling costs. Many share rental agreements are structured so that the landowner's share is
25 based on a price that is net of these costs. Therefore, the appraiser should be careful to examine
26 and, if necessary, adjust the historical price to ensure that the price used in calculating the
27 landowner's rental share is actually reflective of the lease terms.

28 If a variety of crops are grown on the same land over a period of years, a situation typical of
29 irrigated crop land farming, the appraiser must determine the gross return to the landowner for
30 each crop grown during a normal rotation program and average these returns to estimate the
31 economic rent of the property. To arrive at the landowner's net economic income for the subject
32 property, the appraiser must deduct the economic expenses incurred by the landowner to produce
33 and maintain the average annual gross return. The topic of expenses is discussed in Part II,
34 Chapter 2, Charges Against Real Property Gross Income.

35 The normal procedure for determining the landowner's average annual gross return is to compute
36 an estimated return per acre based on the gross farmable acreage in the property. The gross
37 farmable acreage is the total acreage less homesites and other unrestricted improvement sites,
38 road and ditch rights-of-way, etc. Internal access roads, head ditches, etc., are not deducted from
39 the farmable acreage because they are necessary to the growing of the crop. However, frequently

1 growers will report production net of internal access roads, head ditches, etc. It is important for
 2 the appraiser to be aware of how production figures are reported to ensure the data are properly
 3 analyzed.

4 The following is an example of the determination of economic rent for a parcel of irrigated Class I
 5 cropland utilizing share rental analysis:

YEAR	CROP	PRODUCTION (TONS)	SHARE	AVERAGE COMMODITY PRICE (PER TON)	GROSS RETURN PER ACRE
1	Alfalfa	6	25%	\$115	\$172.50
2	Alfalfa	7	25%	\$113	197.75
3	Alfalfa	6.5	25%	\$115	186.88
4	Sugar Beets	24	25%	\$39	234.00
5	Corn	2	331/3%	\$118	78.66
6	Tomatoes	23	15%	\$52	<u>179.40</u>
				Total	\$1,049.19

6

$$\frac{\text{Total Gross Annual Return Per Acre}}{\text{Number of Years}} = \frac{\$1,050 \text{ (rounded)}}{6} = \$175 \text{ per acre}$$

7

8 The anticipated average gross agricultural return to the landlord under this rotation program is
 9 \$175 per acre.²²

10 Commodity prices and production are variable elements in the determination of income by share
 11 rental analysis. Since the income to be capitalized is the anticipated net income for the subject
 12 property, the data used to establish this income theoretically should be anticipated or projected
 13 prices and production appropriate for the area in which the property is located. It can be
 14 extremely difficult to project commodity prices, especially during periods of rapid economic
 15 change, and the circumstances surrounding an open-space property appraisal increase this
 16 difficulty. Open-space property appraisals are generally completed before data needed to make a
 17 reasonable projection of prices for the coming crop year are available. Under these
 18 circumstances, historical commodity prices are generally the best indicator of future prices
 19 available to the appraiser. In projecting historical prices, the appraiser should recognize the
 20 following principles which establish that:

²² All examples throughout this manualhandbook are for demonstrative purposes only and are not meant to reflect conditions in any part of the state.

- 1 • Recent prices are generally better indicators of future prices than prices received in prior
2 years
- 3 • Commodity prices tend to be cyclical in the longer term but are subject to extreme short-
4 term variations caused by sudden changes in supply and demand
- 5 • Prices generally move inversely with production
- 6 • Land income does not necessarily fluctuate in direct proportion to sudden increases or
7 decreases in commodity prices

8 Because commodity prices can be extremely sensitive to fluctuations in production, it is not
9 advisable to make estimates as to projected commodity price separately from estimates of
10 production. For example, if the appraiser uses average production as a guide in determining the
11 yield, then the appraiser should use an average taken over the same number of years as the
12 commodity price.

13 As noted in Part I, Chapter 3, Annual Income Estimates, a single year's data should not be
14 considered as being typical for all years. Instead, the appraiser should consider commodity prices
15 in conjunction with production figures for the previous three to five years. Generally, the most
16 reliance should be placed on recent data. However, the use of historical commodity data should
17 be viewed as only a means of assisting the appraiser in accomplishing the task of forecasting a
18 reasonably anticipated gross income for the property. The use of historical data should be
19 tempered by the exercise of sound appraisal judgment, with the appraiser considering all factors
20 that may have a pronounced effect upon future prices and production.

21 **Owner-Operator Return Analysis**

22 The analysis of owner-operator income and expenses is the third method for determining an
23 economic rent for open-space property. The method involves estimating the economic gross
24 return from a farm and subtracting all expenses to determine net income.

25 A basic problem with this approach is that the income generated by a farm is attributable to two
26 businesses: the farming enterprise and the real property ownership. When applying the owner-
27 operator return analysis method, the appraiser must deduct all income attributable solely to the
28 farming operation because the income to be capitalized is only that attributable to the portion of
29 land restricted by contract. The difficulty of finding data upon which to base this allocation of
30 income is the reason that the cash or share rental analysis are the preferable methods to use in
31 capitalization.

32 Additional problems arise in this method of analysis when the farm is a living unit as well as a
33 production unit. For example, some expenses such as power and labor may be partially
34 attributable to the maintenance of the owner's residence, and these portions would not be
35 legitimate deductions from farm income. As previously noted, all costs of production must be
36 economic costs, and expenses from a particular property should be compared with norms
37 established from the analysis of similar farming operations, or benchmark or university extension

1 studies, etc. A more detailed discussion of the determination of economic costs of production for
2 specific types of rural properties is contained in Part I of this manualhandbook.

3 Because the owner-operator method of income analysis is time-consuming and subject to error, it
4 should generally be used only in the appraisal of some orchards and some specialty crop lands for
5 which rental data are not available. When a number of properties of this type must be appraised,
6 economic expenses should be determined through the analysis of several owner-operator
7 statements representative of the entire group, and these expenses should be deducted from the
8 gross income of comparable properties. This is preferable to making a complete owner-operator
9 analysis of each property. However, the appraiser must be careful to restrict consideration to
10 properties comparable to the subject property. The appraiser should not overlook significant
11 differences in gross income or costs between various areas within the county, and should make
12 appropriate adjustments to reflect the local economic conditions in determining the owner-
13 operator return for the subject property.

14 When this method is used, rental information from properties of similar use and capability may be
15 obtained from other counties to confirm the derived income estimate, providing that there is a
16 good degree of comparability between properties and area economic influences.

17 **Summary**

18 The three methods of estimating agricultural income vary considerably in degree of difficulty and
19 reliability. The degree of difficulty depends upon the availability of data to be collected and
20 analyzed; reliability depends upon the number of estimates and projections that must be made and
21 proficiency in analyzing data. In consideration of these factors, when sufficient cash rental data
22 are available, cash rents should be used to determine the economic income. When sufficient cash
23 rental data are not available, the appraiser should estimate economic income from a share rental
24 analysis or use owner-operator income.

25 **INCOME FROM COMPATIBLE USES**

26 Although most of the income generated by open-space properties is from agricultural enterprises,
27 there are many properties for which a return from compatible uses increases the income to be
28 capitalized.

29 Section 51231 of the Government Code states in part:

30 . . . the [county] board or [city] council, by resolution, shall adopt rules governing
31 the administration of agricultural preserves, . . . In adopting rules . . . the board or
32 council may enumerate those uses, including agricultural laborer housing which are
33 to be considered to be compatible uses on contracted lands (Bracketed
34 words added for clarity.)

35 In defining the income to be capitalized when valuing open-space properties subject to
36 enforceable restrictions, section 423(a)(3) states in part:

1 . . . Revenue shall be the amount of money . . . which the land can be expected to
 2 yield to an owner-operator annually on the average from any use of the land
 3 permitted under the terms by which the land is enforceably restricted, . . .

4 Under these provisions, and in accordance with Government Code sections 51238.1, 51238.2,
 5 and 51238.3, the assessor must assume that any use allowed by a contract approved by the
 6 county/city administration is a compatible use. When income generated by this use is attributable
 7 to the land, it must be capitalized in the manner specified for restricted properties. Since county
 8 governments vary in the administration of open-space contracts, it is impossible to enumerate all
 9 possible compatible uses. Therefore, the consideration of compatible uses will be limited to
 10 several major use categories, but the principles and techniques discussed will usually be applicable
 11 to other more specific uses.

12 Legislation enacted in 1994 and codified in Government Code section 51238.1 sets forth the
 13 guidelines for determining compatibility of uses on lands enrolled in the Williamson Act.²³ The
 14 following discussion of some categories of uses is not an authorization for deeming any particular
 15 use compatible, but is simply a guide for tax assessment. Questions regarding the legality or
 16 compatibility of particular uses should be referred to the local planning department. The
 17 California Department of Conservation may also assist in interpreting the code provisions of the
 18 Williamson Act.

19 **Recreation Income**

20 Many rural properties have actual or potential recreational uses, but few of these uses have value.
 21 The inclusion of income from a recreational use in the income stream to be capitalized is limited
 22 by the provisions in section 423(a)(2) which states in part:

23 . . . There shall be a rebuttable presumption that "prudent management" does not
 24 include use of the land for a recreational use, as defined in subdivision (n) of
 25 Section 51201 of the Government Code, unless the land is actually devoted to that
 26 use. (Emphasis added.)

27 Under this provision, only income generated by an actual recreational use that has value should be
 28 included in a property's income stream. Further, an economic rent for an existing recreational use
 29 must be included only where the land is actually devoted to that use.

30 However, the section prohibits the inclusion of recreational use income when the land is not
 31 actually devoted to such use, unless the appraiser can produce substantial evidence that prudent
 32 management would include such use. Substantial evidence that a prudent owner would develop
 33 or use land for recreational uses, even though the present owner does not do so, is necessary to
 34 rebut the presumption created by this section.

²³ See Government Code sections 51238.1 et seq.

1 Under what circumstances should the appraiser attempt to rebut the presumption that prudent
 2 management would not include recreational use? Each case must be judged on its own specific
 3 facts, but there are certain basic requirements that must be considered. They are:

- 4 • The use must be common or general for comparable properties.
- 5 • The use must have value and be compatible with the agricultural use.
- 6 • The use must increase the total economic return of the property (some recreational uses
 7 may reduce a property's agricultural potential).

8 Only if there is substantial evidence that all of these requirements are met should an estimate of
 9 the potential recreational return be included in the income to be capitalized on the basis that
 10 "prudent management" would include the use of the land for recreational purposes.

11 **Income From Foreign Improvement Sites**

12 In many rural areas it is common for portions of restricted properties to be leased for a term of
 13 years as sites for foreign improvements such as radio towers, television repeaters, etc. Income
 14 generated by land devoted to such compatible uses must be capitalized when determining the
 15 restricted value of the property. Because such compatible uses produce income that lasts for a
 16 limited period of time, rather than into perpetuity, the areas devoted to such uses should be valued
 17 separately by means of income capitalization. The capitalized value of these sites should be added
 18 to the land value established for the balance of the parcel. The area of the site and its access, if
 19 not available for agricultural use, must be deducted from the farmable acreage of the parcel.

20 The recommended technique for valuing these compatible use sites is to estimate the probable
 21 duration of the use and to capitalize the economic rent (generally the contract rent) as a level
 22 annuity. The present worth of the reversionary value of the land based on its restricted use must
 23 be added to the present worth of the annuity.

24 For example, assume that a one acre radio tower site is leased for 10 years at \$300 per year.
 25 Both the term and the rent are considered proper. The restricted value of the land for agricultural
 26 purposes is \$100 per acre. The open-space capitalization rate is 9 percent (interest, taxes, and
 27 risk).

28	\$300 x 6.418 (present worth of 1 per period for 10 yrs. @ 9%)	\$1,925
29	\$100 x .422 (present worth of 1 deferred 10 yrs. @ 9%)	<u>42</u>
30	Total restricted value of the site	\$1,967

31 If the use is considered perpetual, the income is capitalized into perpetuity using the open-space
 32 capitalization rate.

1 **Income From Commercial Enterprises**

2 Occasionally, a portion of a restricted property is used by the owner for a commercial enterprise
3 other than agriculture; for example, a produce-packing shed or a fertilizer company owned by the
4 landowner but doing business with many individuals. If the commercial use is a permitted
5 compatible use, the assessor must value the commercial enterprise site according to the terms of
6 the open-space restriction, i.e., the capitalization of an economic site rent using the open-space
7 capitalization rate. Normally, the commercial use will be perpetual. If the commercial use is
8 permitted only for a limited term, a procedure similar to that described for the valuation of foreign
9 improvement sites can be applied.

10 Estimating the economic rent for the commercial enterprise site is the most difficult part of the
11 valuation procedure. The estimate can be made either by using actual rents of comparable
12 commercial sites or by multiplying the market value of comparable commercial land by a market-
13 derived capitalization rate. The method used should depend upon the quantity and quality of data
14 available.

15 **Income From Sale of Water**

16 A property may have multiple sources of water and/or rights to more water than is required for
17 the operation. For example, a property or portion of a property may be "set-aside" (removed
18 from production to lie fallow) which results in the property having an allocation of water that may
19 go unused. However, there may still be a "district" charge for the unused allocation of water.
20 Thus, in some cases a property will have more water than is needed for the operation and prudent
21 management of the land calls for selling the excess water.

22 If the sale of water is allowed by the water district and is a permitted compatible use, the assessor
23 must value the land according to the open-space restriction, i.e. consider the revenue resulting
24 from the sale of water in determining the income to be capitalized. Section 423(a)(3) expressly
25 provides that the income to be capitalized must be based upon the income actually received and
26 upon typical income received in the area for land under similar use. Accordingly, the revenue
27 resulting from the sale of excess water of a restricted property or a portion of that property
28 should be considered in establishing the income to be capitalized if it is a permitted compatible
29 use.

30 **Income From Mineral Exploration/Extraction Leases**

31 Subject to Government Code sections 51238.1 and 51238.2, mineral exploration/extraction may
32 be deemed a compatible use on land subject to open-space restrictions. Thus, these lands may
33 generate income from mineral exploration/extraction leases. Such a lease results in a change of
34 ownership for property tax purposes under section 61(a), which in turn requires a supplemental
35 assessment under section 75.10. This income should not be confused with the income from
36 known mineral resources such as oil fields or quarries, which are discussed in Part II, Chapter 6.

37 Exploration/extraction leases, generally confined to oil, gas, and geothermal exploration, are
38 essentially options to drill and extract. The typical lease involves a four- to five-year term with

1 bonus or rental payments varying considerably among areas or individual properties. The income
2 is in the form of a level annuity, and should be separately capitalized at a mineral market or band-
3 of-investment derived exploration/extraction capitalization rate for the estimated remaining term
4 of the lease. The exploration/extraction lease value should be added to the other land value
5 components of the property being appraised, (i.e., open-space restricted value, nonrestricted
6 homesite value, etc.) to arrive at a total land value. It should be noted that for the following lien
7 date the lease may have a decline in value pursuant to section 51.

8 There are, however, problems that can complicate the capitalization process. For example:

- 9 • Many lease contracts are not recorded and accurate data may be hard to gather.
- 10 • The rights may be quitclaimed after exploration or the lease may be renewed for future
11 exploration/extraction; therefore, the contract term is not always a good indicator of the
12 actual term.
- 13 • Economic rent may be difficult to determine because actual rents tend to vary with the
14 bargaining power of the landowner.

15 Because rents for exploration/extraction leases tend to be low and lease terms short, the amount
16 of appraised value generated by these leases is usually small. For example, an annual payment of
17 \$5 per acre, a four-year term, and 10 percent market or band-of-investment derived
18 exploration/extraction capitalization rate generates \$16 (rounded) in appraised value the first year
19 ($3.169 (PW 1/P) \times \$5$). However, a longer term and/or higher payment will generate a more
20 significant value. The value of these rights, as determined by the above described capitalization
21 process, should then be added to the appraisal of open-space lands.

22 **Production Contracts**

23 The U.S. Department of Agriculture, through a suborganization known as the Commodity Credit
24 Corporation, executes a limited number of contracts for landowners to produce certain crops
25 under Production Flexibility Contracts. These differ from the government-imposed planting
26 limitations in that Production Flexibility Contracts are voluntary production arrangements
27 between the farmer and the federal government. Most commonly, the grower receives some form
28 of subsidy such as a guaranteed premium price in return for growing a specific crop or restricting
29 the acreage upon which the crop is grown. The questions are, should the revenue attributable to
30 the land be based on the unrestricted market price of the crop; should the revenue be based on the
31 full amount received including subsidies or above-market guaranteed prices; or should the revenue
32 be based on the crops and income that are typical without such a contract?

33 Under standard valuation principles, the estimate of economic rent for income-producing property
34 must be made without regard to actual contract or lease arrangements that may exist. Thus, in
35 valuing a property encumbered by a contract (or lease), the net income to be capitalized is the
36 amount the property would yield were it not so encumbered, whether or not this amount exceeds
37 or falls short of the contract rent. However, the capitalization of income method for the valuation
38 of restricted properties set forth by the Legislature is an exception to this principle. Section

1 423(a)(3) expressly provides that the income to be capitalized must be based upon the rent
2 actually received and upon typical rents received in the area for land under similar use. Section
3 423(a)(3) states in part:

4 ... Revenue shall be the amount of money ... which the land can be expected to
5 yield to an owner-operator annually on the average from any use of the land
6 permitted under the terms by which the land is enforceably restricted. ...

7 Accordingly, the revenue resulting from participation of a restricted property or a portion of that
8 property in a Production Flexibility Contract with the Commodity Credit Corporation, whereby
9 the producer agrees to produce a specific type of crop (wheat, corn, etc.) in return for a certain
10 level of payments for a term of years, should be considered in establishing the income to be
11 capitalized.

12 Section 430 provides that there is a rebuttable presumption that the present use of open-space
13 land enforceably restricted and devoted to agricultural use is its highest and best use. Although a
14 Production Flexibility Contract with the Commodity Credit Corporation is not an enforceable
15 restriction within the meaning of section 430, the present use of the land (e.g., growing wheat
16 instead of alfalfa) is presumed to be the highest and best use. As is the case with other rebuttable
17 presumptions, the presumption may be overcome where there is substantial evidence that a
18 different use is the highest and best use. Accordingly, rents and incomes of comparable properties
19 should be considered and compared to the rent or income earned by the property subject to a
20 Production Flexibility Contract. If typical revenues are clearly higher or lower than the revenue
21 generated by the contract, revenue based on typical use of the land should be estimated and the
22 appraisal report must contain the specific reasons for rejecting the actual use.

23 Planting limitations can also be imposed by the purchasers of a commodity. For example, a
24 tomato processor may contract to purchase the crop from a limited acreage. Leases involving
25 such grower contracts (planting limits) should be analyzed to determine the effect of the contract
26 upon the terms of the lease.

27 **CHARGES AGAINST REAL PROPERTY GROSS INCOME**

28 Since the income to be capitalized in the valuation of open-space properties is the net income
29 attributable to the land, the expenses necessary to maintain this income and the portion of the
30 income attributable to improvements must be subtracted from the expected gross income prior to
31 capitalization. The type of expenses deducted, and to some extent the amount of the deductions,
32 will depend upon the composition of the gross income. For example, a gross economic income
33 derived from cash rents will generally require fewer adjustments than a gross income derived from
34 share rents, and, while a management charge is generally applicable to both income streams, this
35 charge will normally be less in cash rental analysis. In addition to the expenses that are incurred
36 for the creation and maintenance of the income, the property owner is entitled to a fair return *on*
37 the value of the improvements that are necessary to produce the income and the return *of*
38 (recapture) the value of such improvements.

1 Further, since the income being processed is a gross economic rent for the subject property, the
2 deductible expenses must also be economic expenses. When substantial differences exist between
3 estimated economic and actual expenses, the appraiser should review the analysis to be sure the
4 estimated expenses are in fact proper for the property in question.

5 The following sections discuss the major categories of expenses and their application in open-
6 space income analysis.

7 **Crop Production Expenses**

8 In many share rental agreements, the landowner is required to pay a specified portion of certain
9 expenses of production, such as the cost of fertilizer or water. In this type of arrangement, the
10 landowner's share of the crop is generally higher than it would be in a "clean" share agreement
11 where the owner does not pay any production costs. These production expenses are a legitimate
12 charge against the gross income generated by such leases. However, the use of "clean" share
13 rents to estimate economic rent is preferable when such data are available because the
14 consideration of shared expenses adds another variable to the process of determining economic
15 rent by share rental analysis. Since the income to be capitalized is the expected future income,
16 any expense consideration must be based on the same "share rental" premise.

17 **Vacancy and Collection**

18 A charge or expense for vacancy and collection is generally not applicable to the income
19 generated by agricultural properties. Agricultural properties are seldom vacant when economic
20 conditions are favorable since many are owner-operated, and the others are readily leased at a fair
21 rent. A landowner may not be able to negotiate a cash lease, but share rents allow a tenant farmer
22 to operate with no investment in land. There are usually many tenant farmers willing to grow
23 crops on this basis.

24 Collection losses may be applicable to leased agricultural properties of all kinds. Most cash
25 rentals involve at least partial payment to the landowner after the crop has been harvested and
26 sold. The landowner typically subordinates the landowner's cash rent or share rent to the security
27 interest of the tenant's crop lender. Thus, the landowner may not be paid unless sufficient
28 proceeds remain from the sale of the crop after payment of production costs and interest. The
29 appraiser need not make an additional deduction for collection losses when processing the income
30 to be capitalized, but should take collection losses into account. If evidence derived from
31 comparable properties establishes that collection losses are taken into account by the parties in
32 their agreement as to the size of the cash rent or percentage share rent, as the case may be, the
33 appraiser may account for collection losses in that manner; otherwise, if a cash rental or share
34 rental analysis is employed, collection loss is a risk borne by the landowner which should be
35 properly reflected in the risk component of the capitalization rate.

36 **Management and Insurance**

37 A charge for property management is a legitimate deduction from gross income; however, it is
38 important to distinguish between property management and enterprise management. The

1 expenses that can properly be deducted from the gross income attributable to the real property are
2 those incurred by the owner in managing the investment in the real property. Theoretically, a
3 component for investment management is included in the yield rate for long-term government
4 bonds and is therefore already included in the open-space capitalization rate. But, agricultural
5 properties generally require more management than an investment in government bonds. It is also
6 important to recognize that a charge for property management does not compensate for risk. The
7 landowner's risk requires a separate and independent analysis and is reflected in the capitalization
8 rate.

9 Management expenses vary with the type of lease in effect. For example, an owner's management
10 expenses are minor when a property is leased for a cash rent. The owner incurs some expense
11 when initially leasing the property (legal fees, etc.) and some during the term of the agreement, as
12 necessary to assure compliance with the lease provisions. Considerably more owner management
13 is required when a property is encumbered with a share lease. In the case of a share lease, the
14 owner is also concerned with the crops grown, cultivation practices, and share accounting.

15 Property management costs are usually measured as a percent of gross income. This
16 measurement is complicated in agricultural properties because actual management expenses do
17 not vary proportionally with the size of the property even though total gross income may. For
18 example, an 80 acre row crop parcel does not necessarily need twice the management required for
19 a 40 acre parcel of similar use and capability. In addition, actual management costs may vary with
20 the degree of trust that exists between the property owner and the farm operator, the owner's
21 agricultural expertise, and other factors.

22 Insurance is another deductible expense incurred by the property owner. The prudent owner will
23 carry liability insurance and insurance on improvements that are necessary to maintain the income.
24 The owner may also pay a portion of crop insurance costs in share rental agreements. These
25 insurance costs are relatively small, so it is not necessary to itemize them as separate deductions;
26 however, they should be included in the overall management charge.

27 Because of the many variables involved, it is extremely difficult to estimate an economic
28 management expense for agricultural property, and judgment is essential in the final determination
29 of this factor. However, for purposes of open-space valuation, a degree of uniformity in appraisal
30 procedure is desirable. The following schedule of suggested management charges is
31 recommended only as a guide; charges should be determined for each type on an individual basis.

TYPE LEASE	MANAGEMENT CHARGE	COMMENTS
Cash Rent	2 to 3 percent of the gross rental income attributable to the real property.	Minimum management required. Percentage will depend upon the size of the property.
Share Rent	3 to 5 percent of the gross rental income attributable to the real property.	Percentage will depend upon the size of the property and the crops grown.

1 In owner-operator income analysis, a single management charge that includes both enterprise and
 2 property management is generally deducted from the gross farm income as an expense; therefore,
 3 no other management charge need be deducted in such cases.

4 **Production Contracts**

5 ~~The U.S. Department of Agriculture, through a suborganization known as the Commodity Credit~~
 6 ~~Corporation, executes a limited number of contracts for landowners to produce certain crops~~
 7 ~~under Production Flexibility Contracts. These differ from the government-imposed planting~~
 8 ~~limitations in that Production Flexibility Contracts are voluntary production arrangements~~
 9 ~~between the farmer and the federal government. Most commonly, the grower receives some form~~
 10 ~~of subsidy such as a guaranteed premium price in return for growing a specific crop or restricting~~
 11 ~~the acreage upon which the crop is grown. The questions are, should the revenue attributable to~~
 12 ~~the land be based on the unrestricted market price of the crop; should the revenue be based on the~~
 13 ~~full amount received including subsidies or above-market guaranteed prices; or should the revenue~~
 14 ~~be based on the crops and income that are typical without such a contract?~~

15 ~~Under standard valuation principles, the estimate of economic rent for income-producing property~~
 16 ~~must be made without regard to actual contract or lease arrangements that may exist. Thus, in~~
 17 ~~valuing a property encumbered by a contract (or lease), the net income to be capitalized is the~~
 18 ~~amount the property would yield were it not so encumbered, whether or not this amount exceeds~~
 19 ~~or falls short of the contract rent. However, the capitalization of income method for the valuation~~
 20 ~~of restricted properties set forth by the Legislature is an exception to this principle. Section~~
 21 ~~423(a)(3) expressly provides that the income to be capitalized must be based upon the rent~~
 22 ~~actually received and upon typical rents received in the area for land under similar use. Section~~
 23 ~~423(a)(3) states in part:~~

24 ~~Revenue shall be the amount of money . . . which the land can be expected to~~
 25 ~~yield to an owner-operator annually on the average from any use of the land~~
 26 ~~permitted under the terms by which the land is enforceably restricted. . . .~~

27 ~~Accordingly, the revenue resulting from participation of a restricted property or a portion of that~~
 28 ~~property in a Production Flexibility Contract with the Commodity Credit Corporation, whereby~~
 29 ~~the producer agrees to produce a specific type of crop (wheat, corn, etc.) in return for a certain~~
 30 ~~level of payments for a term of years, should be considered in establishing the income to be~~
 31 ~~capitalized.~~

1 ~~Section 430 provides that there is a rebuttable presumption that the present use of open-space~~
2 ~~land enforceably restricted and devoted to agricultural use is its highest and best use. Although a~~
3 ~~Production Flexibility Contract with the Commodity Credit Corporation is not an enforceable~~
4 ~~restriction within the meaning of section 430, the present use of the land (e.g., growing wheat~~
5 ~~instead of alfalfa) is presumed to be the highest and best use. As is the case with other rebuttable~~
6 ~~presumptions, the presumption may be overcome where there is substantial evidence that a~~
7 ~~different use is the highest and best use. Accordingly, rents and incomes of comparable properties~~
8 ~~should be considered and compared to the rent or income earned by the property subject to a~~
9 ~~Production Flexibility Contract. If typical revenues are clearly higher or lower than the revenue~~
10 ~~generated by the contract, revenue based on typical use of the land should be estimated and the~~
11 ~~appraisal report must contain the specific reasons for rejecting the actual use.~~

12 ~~Planting limitations can also be imposed by the purchasers of a commodity. For example, a~~
13 ~~tomato processor may contract to purchase the crop from a limited acreage. Leases involving~~
14 ~~such grower contracts (planting limits) should be analyzed to determine the effect of the contract~~
15 ~~upon the terms of the lease.~~

16 **Special District Charges**

17 Special district assessments other than ad valorem assessments levied on agricultural land and paid
18 by the landowner are legitimate charges against real property income. Irrigation and drainage
19 district charges are the most common type of special district assessments. Both of these charges
20 are expenditures for the maintenance of systems necessary for the generation of the property's
21 income. All ad valorem assessments, i.e., assessments based on a uniform percentage of market
22 value, should be accounted for in the tax component of the capitalization rate and should not be
23 deducted as separate expenses.

24 **Improvement Charges**

25 Because the income to be capitalized in open-space valuation is the net income attributable to land
26 (unless the contract includes improvements), a return *on* the investments in nonliving
27 improvements and an allowance for recapture *of* such investments must be deducted from the
28 gross income. This return *on* and *of* the improvements is applicable only to those nonliving
29 improvements necessary for the maintenance of the property's income stream. Living
30 improvements (trees and vines) are treated for appraisal purposes as land (section 429), and their
31 valuation is discussed in Part II, Chapter 3, Valuation of Trees, Vines, and Other Living
32 Improvements.

33 As a rule, improvement charges are deducted from the income of the parcel on which the
34 improvements are located; however, complications may arise when two or more parcels are
35 serviced by a single improvement. For example, several parcels may be irrigated by a single
36 pump, and this irrigation system would be considered an overimprovement for the site parcel.
37 When all of the parcels serviced are in the same ownership and form a farming unit, it is preferable
38 to prorate the improvement charges over the economic area serviced. This proration results in
39 more realistic land values and better equalization between parcels. The entire improvement value,

1 however, should be included in the appraisal of the site parcel even though the charges are
2 prorated.

3 **Return "On" Improvements**

4 A property owner is entitled to a "fair" return on the value of nonliving improvements. A "fair"
5 rate of return is a market-derived yield rate. The yield rate is market-derived because the
6 legislated open-space rate is applicable only when capitalizing the income attributable to the
7 restricted portions of the property to determine restricted values.

8 One method of finding a market yield rate for nonliving improvements is to extract the rate from
9 sales of similar agricultural properties. This method presumes that the yield rate for
10 improvements is identical to the yield rate for the entire property. If the appraiser determines that
11 this total property rate method is not appropriate for the nonliving improvements, some other
12 method consistent with generally accepted principles of appraisal may be employed.

13 The second element needed to determine the return *on* nonliving improvements is the current
14 market value of the improvements. This value is most commonly determined by the cost
15 approach (replacement cost new less depreciation (RCNLD)) but may be derived through market
16 analysis where applicable data are available. Once these two components (yield rate and current
17 market value) are known, the return *on* improvements is computed by multiplying value by the
18 yield rate.

19 **Return "Of" Improvements**

20 In addition to a fair return *on* an investment, the property owner must earn a sufficient amount to
21 provide a return *of* the current market value of wasting assets. There are at least four potential
22 methods of applying this technique.

- 23 • Provide for straight-line recovery of value by using replacement cost new (RCN) of the
24 improvement and its estimated economic life when new.
- 25 • Provide for straight-line recovery of value by using the estimated current value of the
26 improvement (hereafter referred to as RCNLD, although any market-based method may be
27 used) and its estimated remaining economic life (REL).
- 28 • Use a sinking fund technique based on RCN and economic life when new (the rate of return
29 is the same rate used for return on the investment).
- 30 • Use a sinking fund technique based on RCNLD and REL (the rate of return is the same rate
31 used for return on the investment).

32 Advantages of using a straight-line method (either RCN or RCNLD) include: (1) it is simple to
33 use, and (2) no adjustment is required when the yield rate changes. Some disadvantages are: (1) it
34 overstates true capital recovery allowances because it presumes that the owner will set aside cash
35 for replacement of the asset in a noninterest-bearing fund, and (2) the straight-line method results
36 in different residual income to the land depending on the current market value of the
37 improvements.

1 The primary advantages of using a sinking fund technique to recapture an investment for nonliving
2 agricultural improvements are that it is consistent with the principles of discounted cash flow (see
3 Assessors' Handbook Section 501) and, when used properly, it avoids the problem of income to
4 land changing due to differing estimates of improvement values. Accordingly, the appraiser
5 should use a sinking fund method-technique to account for return of nonliving improvements.

6 The RCN and RCNLD methods should yield the same result if applied properly, so either method
7 is acceptable.

8 A potential advantage of the RCN method is that the same percentage of RCN for any given
9 estimated economic life can be applied to all properties with the same life and yield rate (the rate
10 used for return *on* the property). For example, if the yield rate is 4 percent, the tax rate is 1
11 percent, and the economic life is 20 years, the annual amount is calculated by multiplying the RCN
12 by .0802 (.0302 sinking fund factor and .05 yield and taxes).²⁴ The same percent can be applied
13 to all nonliving improvements that have a 20 year total life and a 5 percent yield and tax rate. A
14 second advantage is that there is usually (but not always) less controversy or uncertainty over the
15 probable economic life of a new improvement as compared to the remaining economic life of an
16 aged improvement. These advantages are minor in many cases, so the appraiser should select
17 either the RCN or RCNLD depending on the reliability of the available data.

18 **Maintenance**

19 A property owner may incur certain expenses in the maintenance of improvements necessary to
20 preserve the property's income stream. For example, irrigation pumps may require periodic
21 overhaul and fences must be repaired. Under the provisions of many agricultural leases, the lessor
22 is required to maintain these improvements, while in other agreements the lessee is responsible.
23 Maintenance expenses are a legitimate deduction from the income generated by the real property
24 when they are incurred by the property owner. When determining whether or not to deduct such
25 expenses in estimating the net income for the property, the appraiser must consider who bears the
26 burden of the maintenance expenses. For example, if an economic income for a property has been
27 developed from cash rents of similar properties whose owners were not responsible for any
28 improvement maintenance, then such a deduction should not be made.

29 **Irrigation Wells**

30 Irrigation wells, which consist of the hole, casing, gravel pack, and affixed pipe, present a special
31 problem in the appraisal of rural properties subject to open-space restrictions primarily because
32 they are classified as land for appraisal purposes,²⁵ even though they have some characteristics of
33 improvements. For example, a well may have a comparatively long life, but it is a wasting asset
34 and suffers from depreciation. A well often requires maintenance to continually produce the
35 volume of water necessary to grow the irrigated crops that maximize income.

²⁴ Factor .0802 is the same as the installment to amortize factor at 5 percent.

²⁵ California Code of Regulations, Property Tax Rule 124.

1 Because wells are classified as land and land values under open-space restrictions are established
 2 by capitalizing income, the following procedure is recommended for treating irrigation well
 3 charges:

- 4 • Deduct a charge for the return *of* the well value from the income attributable to the real
 5 property. This charge can be most accurately determined by ~~dividing~~ multiplying the
 6 replacement cost new of the well by its ~~estimated economic life when new~~ the appropriate
 7 sinking fund factor.
- 8 • Deduct a charge for well maintenance when such an expense is applicable.
- 9 • Do not deduct a charge for return *on* the investment in a well. Instead, allow this income to
 10 remain as income attributable to land to be capitalized at the prescribed open-space rate.

11 When this procedure is followed, no additional value for the well would be added to the restricted
 12 land value.

13 CAPITALIZATION RATE DEVELOPMENT

14 Section 423(b) is very specific concerning the composition of the capitalization rate to be used in
 15 determining restricted land values. It states in part:

16 The capitalization rate to be used in valuing land pursuant to this article shall not
 17 be derived from sales data and shall be the sum of the following components:

18 (1) An interest component to be determined by the board and announced no later
 19 than September 1 of the year preceding the assessment year which is the arithmetic
 20 mean, rounded to the nearest 1/4 percent, of the yield rate for long-term United
 21 States government bonds, as most recently published by the Federal Reserve
 22 Board, and the corresponding yield rates for those bonds, as most recently
 23 published by the Federal Reserve Board as of each September 1 immediately prior
 24 to each of the four immediately preceding assessment years. . . .

25 (2) A risk component which shall be a percentage determined on the basis of the
 26 location and characteristics of the land, the crops to be grown thereon and the
 27 provisions of any lease or rental agreement to which the land is subject.

28 (3) A component for property taxes which shall be a percentage equal to the
 29 estimated total tax rate applicable to the land for the assessment year times the
 30 assessment ratio. . . .

31 (4) A component for amortization of any investment in perennials over their
 32 estimated economic life when the total income from land and perennials other than
 33 timber exceeds the yield from other typical crops grown in the area.

1 **INTEREST COMPONENT**

2 The determination of the interest component to be used in the capitalization rate in the appraisal
 3 of open-space land has been greatly simplified because the method of measurement is specified
 4 and the component is published annually by the State Board of Equalization. The components
 5 published in the years 19689 through 19972004 were as follows:

6

1968	5.00		1978	7.00		1988	9.00
1969	6.00		1979	8.50		1989	9.50
1970	6.25		1980	9.00		1990	8.25
1971	6.75		1981	11.00		1991	9.00
1972	5.75		1982	14.50		1992	8.00
1973	5.50		1983	12.50		1993	7.25
1974	6.75		1984	12.00		1994	6.75
1975	7.25		1985	12.50		1995	7.00
1976	7.25		1986	10.50		1996	7.00
1977	6.75		1987	7.25		1997	7.00

7

<u>1969</u>	<u>6.00</u>		<u>1981</u>	<u>11.00</u>		<u>1993</u>	<u>7.25</u>
<u>1970</u>	<u>6.25</u>		<u>1982</u>	<u>14.50</u>		<u>1994</u>	<u>6.75</u>
<u>1971</u>	<u>6.75</u>		<u>1983</u>	<u>12.50</u>		<u>1995</u>	<u>7.00</u>
<u>1972</u>	<u>5.75</u>		<u>1984</u>	<u>12.00</u>		<u>1996</u>	<u>7.00</u>
<u>1973</u>	<u>5.50</u>		<u>1985</u>	<u>12.50</u>		<u>1997</u>	<u>7.00</u>
<u>1974</u>	<u>6.75</u>		<u>1986</u>	<u>10.50</u>		<u>1998</u>	<u>6.75</u>
<u>1975</u>	<u>7.25</u>		<u>1987</u>	<u>7.25</u>		<u>1999</u>	<u>6.75</u>
<u>1976</u>	<u>7.25</u>		<u>1988</u>	<u>9.00</u>		<u>2000</u>	<u>6.25</u>
<u>1977</u>	<u>6.75</u>		<u>1989</u>	<u>9.50</u>		<u>2001</u>	<u>6.00</u>
<u>1978</u>	<u>7.00</u>		<u>1990</u>	<u>8.25</u>		<u>2002</u>	<u>5.75</u>
<u>1979</u>	<u>8.50</u>		<u>1991</u>	<u>9.00</u>		<u>2003</u>	<u>5.25</u>
<u>1980</u>	<u>9.00</u>		<u>1992</u>	<u>8.00</u>		<u>2004</u>	<u>5.25</u>

8

9

1 RISK COMPONENT

2 The determination of an appropriate risk component, however, is extremely subjective since
3 neither the component nor the calculation to derive it are specified. Section 423(b)(2) lists the
4 elements that must be considered when determining this component but does not expressly state a
5 method of measurement. In actuality, a risk component can only be measured by analyzing
6 thoroughly a very large quantity of sales, and section 423 specifically forbids consideration of
7 sales data for purposes of determining a restricted value. Therefore, the appraiser must rely on
8 sound judgment when estimating this component.

9 In exercising this judgment it is important to keep in mind exactly what will be measured and
10 accounted for in the risk component. *The Dictionary of Real Estate Appraisal*²⁶ defines risk as
11 "the probability that foreseen events will not occur." For purposes of this discussion, risk may be
12 viewed as the uncertainty involved with the income projection for the subject property. The size
13 of the risk component will vary according to what risks have already been considered in the
14 development of the income to be capitalized.

15 There are many elements of risk in any farming or ranching enterprise, but these risks can
16 generally be divided into two categories: those normally incurred in the production and sale of
17 crops or livestock ("production risk") and those related to permanent or long-term reduction in
18 productivity of the property ("productivity risk"). Additionally, when a property is leased, there is
19 also a risk that the lessee will not comply with the lease terms.

20 Production risk results from variations in commodity prices from year to year, coupled with the
21 variability of yields for a property for any future year. Price movements reflecting seasonal,
22 cyclical, and trend characteristics are predictable to some extent, but the inability of farmers and
23 ranchers to predict these prices accurately represents a source of price risk. Additionally, many
24 governmental actions such as trade agreements, embargoes, and fiscal and monetary policy, affect
25 the uncertainty of price. Likewise, while typical yield figures can be determined for a property,
26 these figures can vary greatly year to year due to factors beyond the farmer's or rancher's
27 control—weather, water availability, pests, noxious weeds, disease, changes in regulations on use
28 of pesticides, etc.

29 Productivity risk, or the risk of permanent or long-term reduction in productivity of a property,
30 can result from numerous sources. Productivity risk typically results from sporadic disturbances
31 (floods, earthquakes) or events that are cumulative in effect (salt incursion, declining water table).
32 The following is a list of some items that can cause decreased productivity. The list is intended
33 for example purposes only and is not intended to be an all-inclusive enumeration of factors that
34 decrease land productivity.

- 35 • Flood damage
- 36 • Loss of water

²⁶ *The Dictionary of Real Estate Appraisal*, Third Edition (Chicago, Appraisal Institute, 1993), 312.

- 1 • Soil erosion
- 2 • Declining water table
- 3 • Increasing concentrations of salts and other injurious substances in the soil resulting from
- 4 irrigation and perched water tables
- 5 • Governmental regulations
- 6 • Decreased ground water quality and increased ground water extraction costs resulting from
- 7 ground water overdraft
- 8 • Salt incursion problems that may detrimentally affect future production potential
- 9 • Nonphysical or legal restrictions on land use, productivity, or markets

10 Some events may have the effect of both productivity risk and production risk. For example,
11 floods can wash out crops thereby affecting crop yield for a single season, and at the same time
12 cause severe erosion that has long-term productivity ramifications. This example is particularly
13 relevant for permanent crops. Floods and freezes often not only affect the current year's crop but
14 also yields in succeeding years.

15 As noted above, the size of the risk component will vary according to what risks are considered in
16 the development of the income to be capitalized. The use of economic cash rents in the valuation
17 process may eliminate the necessity of considering short-term production risk. If the rent
18 attributed to a property is a "fair" or "economic" cash rent derived from market data for
19 comparable property, the elements of short-term production risk have already been considered
20 because the tenant has assumed this risk. However, short-term rentals do not normally reflect
21 productivity risk, and this possibility should be accounted for in the risk component unless it has
22 been reflected in the projected income stream to be capitalized. Additionally, the tenant has only
23 assumed the production risk for the term of the lease. If events were to occur to cause a decline
24 in the price of the commodity produced on the property, it is reasonable to assume that the short-
25 term rents for the property would also decline when the lease is renewed. This possibility, which
26 might be called long-term production risk, should also be accounted for in the risk component to
27 the extent that it is not reflected in the projected income stream.

28 As with cash rents, when economic rent for a restricted property is based on share rental analysis,
29 the landowner bears both productivity risk and long-term production risk. Additionally, in a share
30 rental agreement the landowner assumes some of the short-term production risk. However, the
31 effect this has on the selection of a proper risk component depends on how the income stream to
32 be capitalized is developed.

33 As noted earlier, commodity prices tend to be cyclical in the longer term but are subject to
34 extreme short-term variations caused by sudden changes in supply and demand. With share rents
35 the landowner's average annual returns can vary considerably depending on which segment of a
36 given commodity's price and production history is analyzed. However, if the projected net
37 income to be capitalized is determined by analyzing price and production figures taken over a long
38 enough time period as to include cyclical variations, then the income estimate should closely

1 approximate the average amount the landowner will receive over the next several years. Under
2 this scenario, the appropriate risk component may closely approximate that used for cash rents.

3 On the other hand, if the projected net income is based on an analysis of prices for years that only
4 comprise a portion of the "cycle," then the price, and hence the net income to be capitalized, can
5 vary significantly from the average amount that will be received in the future. Whether the net
6 income overstates or understates the expected future income will determine the riskiness of
7 actually receiving the projected income, and, therefore, the selection of an appropriate risk
8 component for inclusion in the capitalization rate.

9 When owner-operator returns are used to estimate economic rent for a property, the risk
10 component will usually be larger than that used in share rental analysis. This is because the use of
11 owner-operator returns requires the appraiser to employ more variables in arriving at net income
12 to be capitalized, which tends to make it more difficult to accurately estimate this figure.

13 Although approximate comparisons of the degrees or levels of risk among agricultural properties
14 can be made, it is not possible to establish a precise method for measuring the risk component in
15 every case, apart from other factors that affect the value and productivity of a property. Given
16 this impreciseness in methodology and the wide variations in properties, a basic risk component of
17 1 percent is recommended as a standard guideline for purposes of developing the capitalization
18 rate used in the valuation of open-space properties.

19 For purposes of determining when a risk component in excess of 1 percent might be appropriate,
20 the appraiser must use judgment in determining facts that would have a significant impact on the
21 property's projected net income stream, but which are not already reflected in it. Consideration
22 should be given to, but not limited to, the following circumstances:

- 23 • Price stability—is the price history for the commodity(ies) grown on the property relatively
24 stable and predictable?
- 25 • Production costs—are the production costs for the subject property and comparable
26 properties stable and predictable?
- 27 • Loss of water supply, water shortages, and uncertainty and reliability of future water
28 deliveries
- 29 • Decreased ground water quality and increased ground water extraction costs resulting from
30 ground water overdrafts
- 31 • Soil erosion
- 32 • Wind damage
- 33 • Flood damage
- 34 • Increasing concentrations of salts and other injurious substances in soil resulting from
35 irrigation and perched water conditions

- 1 • Environmental regulations of agricultural and open lands, including endangered species
- 2 regulations and restrictions on pesticide use
- 3 • Governmental regulations
- 4 • Reduction or withdrawal of tariffs and price supports
- 5 • Availability of farm labor
- 6 • Nonphysical or legal restrictions on land use, productivity, or markets

7 In addition to the consideration of the above circumstances that might increase the risk
 8 component, the following list suggests unique situations where a risk component of less than 1
 9 percent might be appropriate:

- 10 • The income capitalized is an amount stipulated to by the parties in the restrictive agreement
 11 as provided in section 423(a)(3).
- 12 • The net income to be capitalized is determined by analyses of cash rental agreements, for
 13 either the subject property or highly comparable properties, and the net income for the
 14 properties has been steady or increased upon negotiation of new leases.
- 15 • The net income capitalized is based on a guaranteed level of payments to the owner due to
 16 participation in a government program. However, if the remaining term of participation in
 17 the program is less than five years, then the use of a risk component of less than 1 percent is
 18 not appropriate, unless other criteria are met.
- 19 • Presence of a long-term lease.
- 20 • Presence of a long-term contract for the sale of commodity(ies)—remaining term exceeding
 21 seven years.

22 The risk component for trees, vines, and other living improvements requires the appraiser to give
 23 consideration to circumstances that are not reflected in the valuation of land. These additional
 24 circumstances, that may lead to a higher risk component, are discussed in Part II, Chapter 3, Risk
 25 Component.

26 **TAX COMPONENT**

27 Section 423(b)(3) provides that the tax component for property taxes shall be based on the
 28 estimated tax rates applicable for the assessment year. The tax rate shall be the same rate used to
 29 compute the state's reimbursement of local governments for revenues lost because of
 30 homeowners' property tax exemptions in the tax-rate area in which enforceably restricted land is
 31 situated. In other words, the assessor must determine the rate at which the state subvented this
 32 lost revenue and use this same rate as the open-space tax component.

33 Since the implementation of article XIII A, tax rate changes have been minimal and usually do not
 34 materially affect the tax component to be included in the capitalization rate. Most of the tax rates
 35 throughout the state vary from 1 percent to 1.15 percent of assessed value.

1 The tax rate from the prior assessment year should be used to determine the tax component in the
 2 capitalization rate unless it is known that a substantial change in the tax rate will occur. This
 3 component should be rounded to the nearest 1/100 of 1 percent.

4 **VALUATION OF TRANSITIONAL LAND**

5 There are circumstances in which the present highest and best use of land subject to open-space
 6 restrictions is not a permanent agricultural use. This is the case when a new higher and better use,
 7 permitted by the terms of the enforceable restriction, will be established at some fairly definite
 8 time in the future. For example, a parcel of land currently being dry-farmed may be scheduled for
 9 conversion to irrigated crop production upon the completion of a water project. Under these
 10 circumstances, a change in the income stream generated by the property is predictable, and of
 11 course the capitalization process must fit the shape of the projected income stream. In the
 12 example given, the income stream would be characterized by a split-level income stream—a
 13 lower-level stream from the dry-land farming that will terminate, and a higher-level stream from
 14 irrigated farming that is deferred but perpetual.

15 The correct method of capitalizing this variable income stream is to determine the value of each
 16 segment of net income and add the present worth of the deferred portion to the value of the
 17 terminating portion. For an example of this procedure, assume that the subject property will be
 18 dry-farmed for five years prior to irrigation, the annual economic net rent from dry-land farming is
 19 \$20 per acre, and that the economic annual net rent from irrigated farming will be \$100 per acre.
 20 The specified capitalization rate (interest, risk, and taxes) is 9 percent. The restricted value would
 21 be determined as follows:

22 Value of dry-land portion of income stream
 23 Present worth of 1 per period for 5 yrs. @ 9% = 3.89
 24 3.89 x \$20 = \$78 per acre

25
 26 Value of irrigated land portion of income stream
 27 \$100 ÷ .09 = \$1,111.11 or \$1,111 per acre
 28 Present worth of 1 due in 5 yrs. @ 9% = .65
 29 .65 x \$1,111 = \$722 per acre

30
 31 Restricted value of subject property
 32 \$722 + \$78 = \$800 per acre
 33

34 This example assumes that no significant capital investment is needed to generate the higher
 35 income stream. If an investment is required before additional income can be generated, the future
 36 income must be reduced by the amount of the future capital investment required to generate the
 37 higher income stream.

1 There are several alternative methods of mathematically computing this restricted land value, but
2 the valuation principle remains the same: the value is the present worth of the various segments of
3 the income stream.

4 This valuation procedure should be used only when the change in authorized use is clearly
5 predictable and probable. The appraiser should not anticipate development that is not scheduled
6 unless the anticipated change is supported by substantial evidence that it will occur.

7 VALUATION OF LAND SUBJECT TO SCENIC 8 RESTRICTIONS OR OPEN-SPACE EASEMENTS

9 Scenic restrictions are enforceable restrictions if they were granted prior to January 1, 1975 under
10 sections 6950-6954 of the Government Code and if they meet conditions specified in section 421
11 of the Revenue and Taxation Code. Open-space easements granted prior to January 1, 1975
12 under Government Code sections 51050-51065 or under sections 51070-51087 after
13 January 1, 1975, are another form of enforceable restriction. The third form of qualifying open-
14 space easement is one granted to a regional park district, regional park and open-space district, or
15 regional open-space district under sections 5500 et seq. of the Public Resources Code.

16 When any of these restrictions are in effect, the land must be valued by the capitalization of
17 income method specified in section 423, previously described in regard to farmlands under open-
18 space contracts. The values derived are also subject to the same limitations as farmlands in that
19 the capitalized income value cannot exceed the lesser of the current market value or the
20 unrestricted factored base year value of the property.

21 The primary problem in valuing these lands is the determination of the income to be capitalized.
22 Since many properties subject to these forms of enforceable restriction do not actually produce
23 any income, the appraiser must estimate an economic rent based on the highest permitted open-
24 space use for which the land can reasonably be used. For the most part, such lands are at least
25 suitable for livestock grazing, and economic rents can be estimated from nearby lands actually
26 used for this purpose.

ECONOMIC LIFE

Perennial crops such as trees and vines have an extended life span. The physical life of these living improvements varies greatly depending on many factors including the type of plant, its variety, the soil and climate where grown, and its susceptibility to various pests and diseases. However, for purposes of appraisal, economic rather than physical life span of the crop must be considered. The economic life of an orchard or vineyard is the period of time during which the net income provides an economic yield on the full value of the land and improvements.

The economic life of perennials is typically shorter than their physical life. In addition to the items listed above, the economic life of trees and vines is affected by their level of production, consumer demand for the products, the commodities' quality, as well as many other factors. Since economic life greatly affects the earning capacity of an orchard or vineyard, the determination of the proper life is extremely important when using the income approach to value. Assessors should consult with their county's University of California Cooperative Extension Farm Advisor, appropriate trade associations, growers, and other experts when attempting to determine the economic life expectancy...expectancies... of trees and vines. Observing historical trends in the marketplace regarding ages of removed orchards and vineyards is yet another important means of estimating proper economic life for living improvements.

DETERMINATION OF THE INCOME TO BE CAPITALIZED

WHEN THE RESTRICTED PROPERTY CONSISTS OF LAND AND LIVING IMPROVEMENTS

To determine the net tree or vine income to be capitalized, the appraiser must first determine the gross income attributable to the total property (land plus living improvements). The same general methods of income analysis applied in the determination of annual crop income (cash rental, share rental, and owner-operator return analysis) are applicable to orchard and vineyard properties, but data sources are generally more limited. A smaller percentage of orchard properties are leased, and very few are leased for cash. Existing share leases are normally for relatively short terms, and the shares or percentages only consider the variation in expected yield during the individual lease period.

Share rents derived from the analysis of short-term leases can only be applied to orchards or vineyards in the same relative stage of production. For example, a share rent that is economic for an almond orchard in peak production would not be economic for an almond orchard that was either immature or past its prime and producing at a lower level. The various stages of production of perennials and the methods of capitalizing the income generated in these stages are discussed in Part II, Chapter 3, Methods of Capitalization.

Despite its shortcomings, share rental analysis is the preferred method of estimating income attributable to orchard or vineyard properties when sufficient data are available. As in the analysis of annual crop income, commodity prices and production estimates should be based on the consideration of past performance and future potential.

1 Once the economic gross income for the total real property has been estimated, the expenses
 2 necessary to sustain this income must be deducted to obtain the net income from land and living
 3 improvements. Expenses incurred by the property owner are generally similar to those previously
 4 discussed in Part II, Chapter 2, Valuation of Land, but there may be additional improvements to
 5 consider. For example, perennials may require frost protection equipment, trellises, etc.
 6 Although such improvements are not necessarily needed to generate the income attributable to the
 7 land, and the charges *on* and *of* such improvements are theoretically chargeable against the
 8 income attributable to the perennials, it is not necessary to separate the expenses applicable to
 9 each agent of production. All expenses necessary to maintain the total property's income stream
 10 should be deducted prior to the allocation of the income between land and living improvements.

11 A special problem arises in the valuation of orchard or vineyard properties when a portion of the
 12 trees or vines are exempt from taxation and an improvement, such as a frost protection system,
 13 services the entire property. In this circumstance, the tree or vine income to be capitalized is
 14 generated only by the nonexempt portion of the living improvements, and this portion of the
 15 property should not bear the charges of the entire frost protection system. The return *on* and *of*
 16 such improvements should be prorated over the entire serviced acreage, and only the portion of
 17 these charges attributable to the taxable tree or vine acreage should be deducted from the income
 18 stream. The portion of the property containing the exempt perennials should be valued as bare
 19 land without consideration for the expenses generated by the frost protection system. For
 20 example:

21 A 40-Acre Orange Grove With:
 22 30 Acres of Mature Trees
 23 10 Acres of Immature Trees Exempt from Property Tax
 24
 25 Special Equipment (Frost Protection System)
 26 Value: \$12,000 with 20-Year Remaining Economic Life
 27 Market Rate of Return on Equipment is 3 Percent

28
 29 Property Taxes
 30 1 Percent of Value

31
 32 Solution:
 33 Return *On/Of* \$12,000 x .073582* ÷ 40 Acres \$22/Acre
 34 (*installment to amortize 4% @ 20 yrs.)
 35

36 This per acre charge would be deducted from the gross income generated by the mature trees in
 37 the valuation of the 30-acre portion, but it would not be deducted from the economic land rent to
 38 be capitalized in determining the land value of the 10 acres. The value of the 10-acre portion
 39 would be computed by capitalizing the same net income that was attributable to the land in the
 40 nonexempt portion of the grove. Of course, the lesser of the factored base year value or the
 41 current market value of the nonliving improvements must be added to the restricted land value in

1 the appraisal of the entire property unless such nonliving improvements are also restricted by the
2 contract.²⁷

3 Although rental analysis is the preferable method of determining orchard or vineyard income, lack
4 of data may preclude its use. Thus, the owner-operator income analysis may be the only
5 applicable method of income determination. The same general procedure and cautions applicable
6 to the analysis of owner-operator return on open-land parcels are relevant to the analysis of
7 orchard and vineyard properties. Both income and expenses used in the analysis must be
8 economic. Production should be estimated from historical production, the stage of development
9 of the living improvements, and their potential. Commodity prices are generally estimated by
10 using a straight or weighted average, and the expenses are estimated by an analysis of the subject's
11 and similar properties' actual expenses and data developed by the Agricultural Extension Service,
12 other governmental agencies, and the agricultural industry.

13 The complete owner-operator analysis of every orchard or vineyard property being appraised is
14 generally impractical in a mass appraisal program. When many similar properties are being
15 appraised, several representative properties should be analyzed to estimate economic share rents.
16 The typical share rent can then be applied in the appraisal of other similar properties.

17 Once the net income attributable to the land and living improvements has been estimated, this
18 income must be allocated between them because amortization must be provided for in the
19 capitalization of the income attributable to the living improvements. This allocation is
20 accomplished by estimating the net income attributable to the land and subtracting it from the
21 total net income. The residual is the net income attributable to the living improvements.

22 There are three acceptable methods of estimating the income attributable to the land:²⁸

- 23 • Estimate the amount of net income the land would yield if planted to typical annual crops
24 grown in the area.
- 25 • Estimate the amount of net income required under current market conditions to justify an
26 investment equal to the replacement cost of the perennials with a life equal to the estimated
27 total economic life of the perennials, and subtract this amount of net income from the
28 estimate of the total net income from the land and perennials.
- 29 • Estimate the market value of the land by the comparative sales approach, and multiply this
30 estimate by a market-derived rate of return. Sales used for comparative purposes shall not
31 include those materially influenced by the possibility of nonagricultural uses.

32 The applicability of each method will depend upon the attributes of the subject property and the
33 type of data available.

²⁷ See Revenue and Taxation Code section 423(e).

²⁸ California Code of Regulations, Property Tax Rule 52.

1 The first method is most commonly used because it is the easiest to apply, although not always
2 the most accurate. It is correctly applied only where the production of annual and perennial crops
3 are alternative and equal uses for the land, i.e., where the value from either use is similar.

4 There may be circumstances where lands used for annual crop production appear to be
5 comparable to orchard or vineyard lands but actually are not. Local climatic conditions, depth of
6 soil, depth of water table, and other factors that are not readily apparent can make the land
7 unsuitable for orchard or vineyard use. When the lands are not truly comparable, income
8 generated by land used for annual crops will not be a realistic indication of the economic rent
9 attributable to orchard or vineyard land even though the properties have similar potential for
10 annual production.

11 The second and least desirable method of estimating the income attributable to land is a land
12 residual method which assumes that the replacement cost of the living improvements is equal to
13 their value. This is a time-consuming method subject to error and should only be used when
14 comparable bare land sales are not available or comparable land is seldom planted to annuals.

15 The third method is preferable where sales data for comparable lands suitable for orchards or
16 vineyards are available and where a yield rate for orchard or vineyard properties can be derived
17 from market data. In many instances, land income estimated in this manner will be higher than the
18 income from similar open land used for annual crop production. This difference in income
19 indicates that orchard and vineyard use is a higher and better use for the land than annual crop
20 production. As the income is derived from actual orchard use, it is a better indicator of economic
21 land rent. This method should be used when sufficient market data are available. It is important
22 to note that this method can only be used to allocate income to the land because the law
23 specifically prohibits the use of current sales to determine the land value.

24 A special problem arises when the economic income generated by the total property is too small
25 to produce a residual income attributable to the living improvements. If this occurs in a mature
26 orchard or vineyard, the living improvements have no value because none of the present income is
27 attributable to them, and there is no potential for increased future income. However, the income
28 attributable to the land will not be reduced below the level that could be expected were the land
29 planted to annual crops even though the net income from the orchard or vineyard is below this
30 potential annual crop income.²⁹

31 If current orchard or vineyard income is low because the living improvements are immature, these
32 improvements will still have value if they have any future potential because their present value is
33 based on the potential income from the orchard or vineyard over its entire remaining economic
34 life. Of course, fruit and nut trees are exempt from property taxation until four years after the

²⁹ See Revenue and Taxation Code section 423.

1 season in which they were planted in orchard form, and grapevines are exempt until three years
2 after the season in which they were planted in vineyard form.³⁰

3 **WHEN THE RESTRICTED PROPERTY CONSISTS OF LAND, LIVING IMPROVEMENTS, AND** 4 **NONLIVING IMPROVEMENTS**

5 To determine the net tree or vine income to be capitalized, the appraiser must first determine the
6 gross income attributable to the property and deduct the expenses necessary to sustain this
7 income. The procedure is similar to that discussed above except that the expenses deducted from
8 the gross income will not include nonliving improvement charges because the income attributable
9 to these improvements must remain in the income to be capitalized at the open-space rate.

10 Once the net income attributable to land, living, and nonliving improvements has been estimated,
11 this income must be allocated among the three elements because amortization must be provided
12 for in the capitalization of the income attributable to the living and nonliving improvements. This
13 allocation is accomplished by the following steps:

- 14 1. Estimating the net income attributable to the land in the manner described in "When the
15 Restricted Property Consists of Land and Living Improvements" above, and subtracting the
16 amount from the total net income; and
- 17 2. Estimating the net income (prior to consideration of recapture) attributable to the restricted
18 nonliving improvements, and subtracting this amount from the amount determined in step
19 1. The residual is the net income attributable to the living improvements.

20 While it is theoretically possible to deduct the income attributable to the trees or vines in step 2
21 and make the residual income attributable to the nonliving improvements, the prescribed
22 procedure normally results in a more equitable allocation because the charges to the nonliving
23 improvements can be more easily and accurately determined than charges to the trees or vines.
24 The method for determining the income attributable to the nonliving restricted improvements and
25 their valuation is contained in Part II, Chapter 4, Valuation of Nonliving Improvements.

26 **CAPITALIZATION PROCESS**

27 To capitalize the residual income attributable to living improvements into a restricted value, the
28 appraiser must determine the proper method of capitalization and the appropriate capitalization
29 rate. Since living improvements are depreciating assets, some method of recapture must be
30 included in the capitalization process.

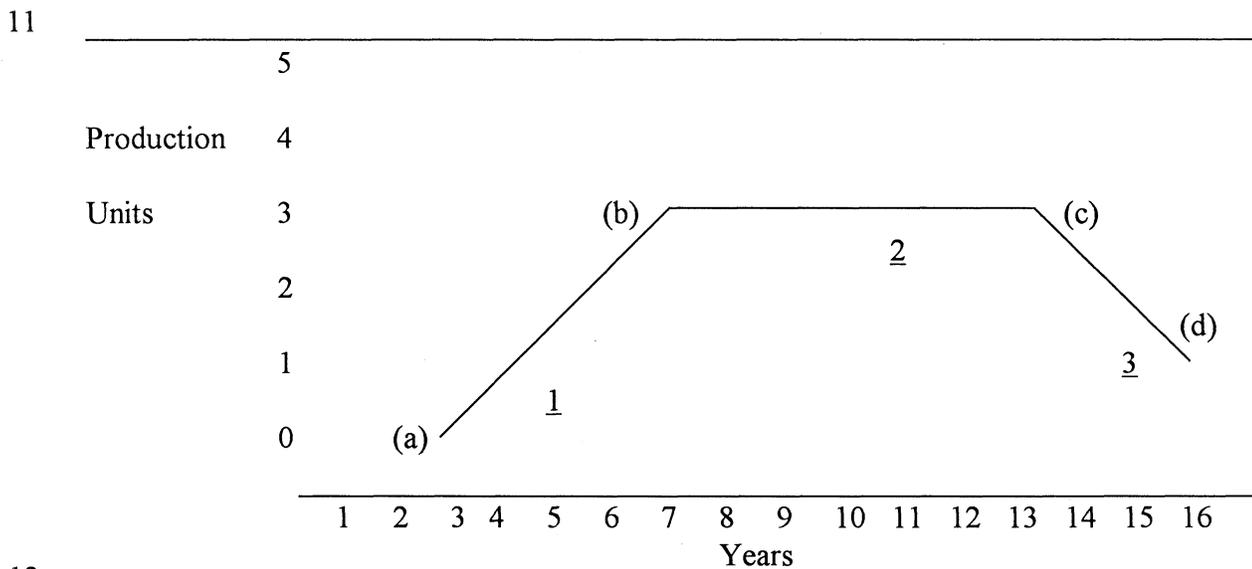
31 **METHODS OF CAPITALIZATION**

32 The appropriate method of capitalization will depend primarily on the shape of the anticipated
33 income stream. The estimation of this shape and the choice of the method of capitalization are

³⁰ Article XIII, section 3(i) of the California Constitution.

1 particularly important steps in the appraisal of open-space properties because the capitalization
 2 rate is not market-derived. When the capitalization rate is built up from given components, as in
 3 open-space rate development, it becomes extremely important to apply this rate in a capitalization
 4 method that is appropriate for the actual income stream. Naturally, the income stream varies with
 5 the stage of production or life cycle of the crop.

6 All living improvements have a similar life cycle. This cycle is composed of three periods or
 7 stages of production: (1) a period of development when production (income stream) initiates and
 8 rises; (2) a period of maturity when production remains relatively stable; and (3) a period of
 9 decline when production drops as the improvements near the end of their economic lives. This
 10 concept can be demonstrated graphically as follows:



13 This diagram is an oversimplification. In actuality, the line will be an irregular curve and all three
 14 periods will vary according to the type of perennial and its environment; but it does demonstrate
 15 the problems inherent in the valuation of living improvements. As previously stated, the valuation
 16 of trees and vines must take into consideration the expected income of the orchard or vineyard
 17 during its entire remaining economic life. The result is a four-fold valuation problem:

- 19
- Estimating the shape, size, and duration of the income stream to be generated by the living
 20 improvements;
 - Capitalizing the various segments of the income stream by the appropriate capitalization
 21 method;
 - Determining the present worth of any deferred values; and
 22
 - Summing the present worth of each segment of the income stream to determine the total
 23 value of the living improvements.
 24
 25

1 It follows that the computations required in the valuation of specific trees or vines will vary
2 according to their stage of production and remaining economic life.

3 Because the probable future income stream is irregular, the most accurate method of valuing
4 living improvements is to estimate the present worth of each future year of (irregular) income
5 (i.e., the discounted cash flow method). Prior to the availability of computer spreadsheets, this
6 method was very time-consuming and was not recommended except for the period of
7 development. Today, discounting an irregular income stream is mechanically a relatively simple
8 process. Therefore, the decision to estimate future incomes on a year-by-year basis or to use
9 traditional methods such as level annuities and straight-line decline is based on the reliability of the
10 income and expense data, especially for years far in the future. Although level annuity and
11 straight-line decline premises may not be technically as accurate as annual discounted cash flow
12 calculations, the traditional methods generally avoid the problem of making numerous
13 assumptions about production and prices many years in the future.

14 **Valuation of Mature Trees and Vines**

15 When capitalizing the income attributable to perennials, the appraiser must estimate the shape and
16 duration of the remaining income and capitalize it accordingly. The preferred method is to sum
17 the present worth of the anticipated net income for each year remaining in the perennial's
18 economic life. This is done by multiplying each year's net income figure by the factor for the
19 present worth of 1 (PW 1) for the proper period and the open-space capitalization rate (interest,
20 risk, and taxes). This procedure can best be illustrated by an example.

21 Assume an orchard is to be valued at the beginning of its sixth year. The orchard's production is
22 expected to increase through the ninth year, remain constant for the next 15 years, and then begin
23 to decline. The per acre net income from the trees can be developed as follows:

Tree Age	Per Acre Production (Tons)	Price Per Ton	Share Amount	Gross Income	Expenses and Improvement Charges	Net Income to Land and Trees	Net Income to Land	Net Income to Trees
6	6	\$325	0.25	\$488	\$84	\$404	\$120	\$284
7	7.5	\$325	0.25	\$609	\$92	\$517	\$120	\$397
8	9	\$325	0.25	\$731	\$99	\$632	\$120	\$512
9	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
10	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
11	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
12	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
13	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
14	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
15	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
16	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
17	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
18	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
19	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
20	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
21	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
22	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
23	10	\$325	0.25	\$813	\$104	\$709	\$120	\$589
24	9	\$325	0.25	\$731	\$99	\$632	\$120	\$512
25	8	\$325	0.25	\$650	\$94	\$556	\$120	\$436
26	7	\$325	0.25	\$569	\$89	\$480	\$120	\$360
27	6	\$325	0.25	\$488	\$84	\$404	\$120	\$284
28	5	\$325	0.25	\$406	\$79	\$327	\$120	\$207
29	4	\$325	0.25	\$325	\$75	\$250	\$120	\$130
30	3	\$325	0.25	\$244	\$70	\$174	\$120	\$54

1

- 2 If, for example, the open-space capitalization rate is 9 percent (7 percent interest, 1 percent taxes,
3 1 percent risk), then the per acre present value of the orchard can be computed as follows:

Tree Age	Net Income to Trees	Years Deferred	PW 1 @ 9% (Rounded)	Present Value (Rounded)
6	\$284	1	.92	\$261
7	\$397	2	.84	\$333
8	\$512	3	.77	\$394
9	\$589	4	.71	\$418
10	\$589	5	.65	\$383
11	\$589	6	.60	\$353
12	\$589	7	.55	\$324
13	\$589	8	.50	\$294
14	\$589	9	.46	\$271
15	\$589	10	.42	\$247
16	\$589	11	.39	\$230
17	\$589	12	.36	\$212
18	\$589	13	.33	\$194
19	\$589	14	.30	\$177
20	\$589	15	.27	\$159
21	\$589	16	.25	\$147
22	\$589	17	.23	\$135
23	\$589	18	.21	\$124
24	\$512	19	.19	\$97
25	\$436	20	.17	\$74
26	\$360	21	.16	\$58
27	\$284	22	.15	\$43
28	\$207	23	.14	\$29
29	\$130	24	.13	\$17
30	\$54	25	.12	\$6

Total Per Acre Value of Orchard \$4,980

1

2

3 The income generated for orchards and vineyards can be valued using the following method as
4 well. The annual income expected during the incline period is capitalized by multiplying the net
5 annual income attributable to the trees or vines by the factor for the present worth of 1 (PW 1) for
6 each year of incline at the open-space capitalization rate (including components for interest, taxes,
7 and risk).

8 The annual income expected during the stable period is capitalized by multiplying the net annual
9 income attributable to the trees or vines by the factor for the present worth of 1 per period (PW
10 1/P) for the proper term at the open-space capitalization rate (including components for interest,
11 taxes, and risk). The income generated during the period of declining income is capitalized in the
12 same fashion as the incline period. The annual income is multiplied by the present worth of 1

1 (PW 1) for each year of decline at the open-space capitalization rate (including components for
2 interest, taxes, and risk).

3 For the example above, the value of the trees could be valued as follows:

4		Net Income to		Present Value	
5	<u>Tree Age</u>	<u>Trees</u>	<u>Years Deferred</u>	<u>PW 1 @ 9%</u>	
6				<u>(Rounded)</u>	
7	36	\$284	1	.92	\$261
8	7	\$397	2	.84	\$333
9	8	\$512	3	.77	\$394
10	9-23	\$589		\$589 x 6.2243 =	\$3,666
11				8.755625 - 2.531295 = 6.2243*	
12				*(PW of \$1/period 18 yrs. @ 9% -	
13				PW of \$1/period 3 yrs. @ 9%)	
14	24	\$512	19	.19	\$97
15	25	\$436	20	.17	\$74
16	26	\$360	21	.16	\$58
17	27	\$284	22	.15	\$43
18	28	\$207	23	.14	\$29
19	29	\$130	24	.13	\$17
20	30	\$54	25	.12	\$6
21					
22					<u>\$4,978</u>

23 Finally, although section 423 contemplated that all capitalization will be done by use of the
24 formula $V = I/R$, the use of present worth factors is a legitimate method of open-space
25 capitalization. A factor is the reciprocal of a rate, and segments of the tree or vine income could
26 be capitalized by dividing the income by the reciprocal of the appropriate factor.

27 **Valuation of Perennials Classified as Land**

28 Certain relatively short-lived perennials such as asparagus and artichokes are classified as land for
29 assessment purposes.³¹ When such perennials produce a net income above that attributable to the
30 bare land, they should be valued in the same manner as trees and vines, and their capitalized value
31 should be added to the restricted land value. However, unlike trees and vines, these plants have
32 no statutory exemption period.

33 Because of the short economic lives of these perennials, their various stages of production will be
34 condensed. For example, asparagus will normally be in peak production by the third year, and
35 production will remain level through the tenth year. The total economic life of this crop does not
36 normally exceed ten years.

³¹ California Code of Regulations, Property Tax Rule 124.

1 CAPITALIZATION RATE

2 The capitalization rate applicable to the valuation of living improvements, aside from the
3 amortization component, is composed of the same three elements that are included in the rate
4 developed for the valuation of open land: interest, risk, and taxes. The components for yield and
5 taxes are exactly the same as they would be in a capitalization rate developed for the valuation of
6 similar land devoted to the production of annual crops. The risk component, however, may differ
7 for orchard or vineyard properties.

8 RISK COMPONENT

9 Production risks may be higher in some areas for orchard or vineyard crops than for annual crops,
10 primarily because the plants are perennial. Damage caused by cultural or climatic stress can result
11 in lower production for a period of years and, because of the comparatively slow growth of
12 perennials and the high costs of removal, alternate crops cannot be easily substituted when prices
13 or production are expected to be low.

14 The same basic problem exists in the development of the risk rate for trees or vines that exists in
15 the development of a rate for land devoted to the production of annual crops. However, certain
16 assumptions can be made about the relative degree of risk for trees and vines in various
17 circumstances:

- 18 • The risk of loss of productivity is the same on land used for orchards and vineyards as it
19 would be on similar open land.
- 20 • The amount of production risk assumed by the property owner will depend upon the extent
21 of involvement in the production aspects of the farming enterprise. There is little or no
22 short-term production risk assumed by the landowner in a cash lease, while the landowner
23 assumes all risks as an owner-operator.
- 24 • Production risks will be higher and more variable in the production of orchard and vineyard
25 crops than in the production of annual crops.

26 Once the risk component to be included in the capitalization rate for living improvements has been
27 estimated, one basic question involving risk still remains: what risk rate should be included in the
28 capitalization rate used to value the land portion of the total property? The issue is whether it
29 should be the same as that included in the tree and vine capitalization rate, or should it be the
30 lower rate applicable to the valuation of open land?

31 Determining the risk component will depend upon the method used to derive the income
32 attributable to land in the allocation process. Where land income is derived by estimating the
33 amount of net income the land would yield if planted to typical annual crops grown in the area,
34 the risk component applicable to the land should be the same as the component appropriate to the
35 valuation of similar land devoted to the production of annual crops. Since the income being
36 capitalized is annual crop income, the value of this land should be consistent with the values of
37 similar lands, and this consistency can be achieved only by using the same risk component in the
38 capitalization rate. Although this procedure requires the use of a "split" rate (a method usually

1 unacceptable in the market value appraisal), it is permissible to use it in the valuation of open-
2 space land. The reason is that since the goal of the appraisal is not market value but statutory
3 compliance, the capitalization rate is not market-derived, and the income being capitalized is not
4 related to the income generated by the living improvements.

5 However, if the income attributable to the land is derived by multiplying the market value of the
6 land by a market-derived capitalization rate or by a land residual analysis, the risk component
7 should be the same as that included in the capitalization rate applicable to the living
8 improvements. In both methods, the income attributable to the land is derived from its highest
9 and best use as an orchard or vineyard site. It is not necessary to equalize land values with those
10 of lands in annual crop production.

CHAPTER 4: VALUATION OF NONLIVING IMPROVEMENTS

All property not specifically restricted by open-space contract must be valued for tax purposes in accordance with article XIII A. Since most nonliving improvements on open-space properties are not included in the enforceable restriction, they are valued in this manner. However, an exception applies under the provisions of section 423(e), to nonliving improvements which contribute to the income of the land, and therefore can be restricted and valued by the capitalization of income method contained in section 423 if the open-space contract specifically contains a provision allowing this. The improvements that contribute to the land income include, but are not limited to, wells, pumps, pipelines, fences, and structures that are necessary or convenient to the enforceable restricted uses of the land.

Therefore, there are two separate categories of nonliving improvements: those that are subject to open-space valuation procedures and those that are not. In order for the assessor to value enforceably restricted properties that include nonliving improvements, it is necessary to determine the appraisal units involved. For purposes of dealing with restricted properties, the appraisal unit can be defined as that which is restricted becomes an appraisal unit, and that which is unrestricted becomes a separate appraisal unit within the definition of section 51(d).

The restricted nonliving improvements are to be valued under section 423 (subdivisions (d) and (e)) at the lowest of their restricted value, factored base year value, or current market value. Of course, these improvements along with the other restricted portions of the property are considered an appraisal unit for purposes of determining the lowest of these values. However, the statute is silent as to the valuation of unrestricted nonliving improvements on the restricted portions of the property. Sections 423(d) and (e) do not address unrestricted nonliving improvements since the valuation methodology therein is for only the restricted part of the property. Whatever portions of the property that are not enforceably restricted fall outside the parameters of the statute and are subject to the provisions of law applicable to all other properties. Section 52(a) states that "property which is enforceably restricted pursuant to Section 8 of Article XIII of the California Constitution shall be valued for property tax purposes pursuant to Article 1.5. . . ."

By application, this means that the unrestricted nonliving improvements are not to be valued under that methodology and must be "carved out" of the restricted portions of the property. Under the authority of section 51(d), the assessor must accomplish this by valuing the unrestricted improvements as a separate appraisal unit. Thus, even though it might be highly unlikely or impossible for the unrestricted improvements to actually be bought and sold in the marketplace, the unrestricted improvements must be valued as though they were a separate appraisal unit and traded in that manner. The result is that under section 51(a), the "appraisal unit" consisting of the unrestricted nonliving improvements must be enrolled at the lesser of the factored base year value or the fair market value.

The appropriate method of determining the income attributable to restricted nonliving improvements will depend upon the composition of the total property. If the improvements are a

1 relatively small part of the total property value, i.e., a parcel of row crop land with irrigation
2 improvements, the improvement income to be capitalized should be calculated in the same manner
3 as unrestricted improvement charges are calculated when determining the net income attributable
4 to land. That is, the current market value of the improvement is multiplied by a capitalization rate
5 that includes a market-derived yield rate, a tax component, and a component for recapture, i.e., a
6 return *on* and *of* the improvement value. It is essential that the yield rate be market-derived. As a
7 market yield rate already reflects the degree of risk considered by the market, an additional risk
8 component need not be added.

9 The following example illustrates the proper method for determining the restricted value of both
10 land and nonliving improvements by means of capitalization when the improvements are a
11 relatively small part of the total property value.

12 The restricted property is a 300-acre farm consisting of irrigated row crop land. The
13 improvements specifically restricted by the contract include an underground concrete pipeline and
14 an irrigation lift pump. There are no unrestricted improvements. The irrigation pump and
15 pipeline have a replacement cost new less depreciation (RCNLD) of \$30,000. RCNLD seems to
16 be the most reliable indicator of the current market value of these restricted improvements. The
17 estimated remaining economic life of the improvements is 20 years. A fair economic rent of \$150
18 per acre has been derived by a share rental analysis of typical cropping patterns in the area.
19 Typical landlord expenses are \$20 per acre for irrigation district assessment and a management
20 charge of 3 percent of gross share income. Research has identified a market-derived yield rate
21 applicable to farm properties of 4 percent. The current legislated open-space interest rate is 7
22 percent; a risk rate component of 1 percent for share rental operations is selected, and the current
23 local tax rate is 1 percent.

24

1	Gross Potential Income:	300 Acres x \$150	\$45,000
2			
3	Less Deductible Expenses:		
4	Management and Insurance	3% x \$45,000	\$1,350
5	Irrigation District Levy	300 Acres x \$20	\$6,000
6			<u>-7,350</u>
7	Net Income to Land and Improvements:		\$37,650
8			
9	Less Income Attributable to Improvements:		
10	Improvement Charges 4% Yield, 1% Taxes,		
11	20 Year REL		
12	(Installment to Amortize—5% @ 20 yrs.		
13	\$30,000 x .080243)		-2,407
14			
15	Net Income to Land		\$35,243
16			
17	Restricted Rate for Land:		
18	7% Interest + 1% Risk + 1% Taxes = 9%		
19			
20	Restricted Value of Land:		
21	\$35,243 ÷ .09		\$391,589
22			
23	Restricted Rate for Improvements:		
24	7% Interest + 1% Risk + 1% Taxes		
25	+ .0195 Amortization = .1095		
26			
27	Restricted Improvement Value:		
28	\$2,407 ÷ .1095		<u>\$21,981</u>
29			

30 When the nonliving improvement value is a large portion of the total property value, for example
31 a dairy or poultry ranch, an improvement residual technique may be used. In this method, the
32 income attributable to the land is deducted from the economic rent for the entire property; the
33 remainder is the income attributable to the improvements. An example of this procedure follows.

34 The property is a grade A dairy consisting of five acres of land and modern improvements with a
35 current market value of \$200,000 and a 25-year remaining economic life. Nonliving
36 improvements are restricted by the terms of the contract. The current market value of the land is
37 approximately \$20,000. The fair rent for the property is \$24,000 a year after owner expenses are
38 deducted. Capitalization rate components are:

1		
2	Taxes	1%
3	Market-Derived Yield	4%
4	Open-Space Interest	7%
5	Open-Space Risk	1%
6		
7	Total Net Income	\$24,000
8		
9	Income Attributable to Land	
10	\$20,000 x .05 (.04 Yield + .01 Taxes)	<u>-1,000</u>
11		
12	Income Attributable to Improvements	\$23,000
13		
14	Restricted Rate for Improvements	
15	7% Interest + 1% Risk + 1% Taxes	
16	+ .0118 Amortization = .1018	
17	Restricted Value of Improvements	
18	\$23,000 ÷ .1018	\$225,933
19		
20	Restricted Rate for Land	
21	7% Interest + 1% Risk + 1% Taxes = 9%	
22	Restricted Value of Land	
23	\$1,000 ÷ .09	\$ <u>11,111</u>
24		
25	Total Restricted Value	<u>\$237,044</u>

CHAPTER 5: VALUATION OF RESIDENTIAL SITES

The Legislature has expressly stated that residences and residential sites are not restricted. Section 428 states provides:

The provisions of this article shall not apply to any residence, including any agricultural laborer housing facility as provided for in Sections 51220, 51231, 51238, and 51282.3 of the Government Code, on the land being valued or to an area of reasonable size used as a site for such a residence.

Even though section 51231 of the Government Code specifically recognizes farm laborer housing as a compatible use for property restricted by a California Land Conservation Act contract, section 428 precludes the valuation of the facility or its site as restricted property. Therefore, any residential site located on a restricted property is to be valued according to the factored base year value or current market value concept of article XIII A.

When a restricted property contains residential improvements, the appropriate steps for resolving the valuation problem are as follows:

- Determine if the improvement qualifies as a residence
- Estimate a reasonable site size for any qualifying residences
- Determine the base year value of each qualifying site

To qualify as a residence, the structure should be built for purposes of and be capable of being used as a permanent home either by someone with an ownership interest in the property, a renter, or a person employed as an agricultural laborer.

Once it is determined that section 428 applies, the appraiser must estimate the size of the site. Section 428 states only that the size of the residential site should be "reasonable." Thus, the appraiser must exercise sound appraisal judgment in estimating the "reasonable" size for any specific residence. Generally, the area should be large enough to encompass the dwelling, related improvements such as garages and sheds, landscaped areas, utility sources such as domestic wells and septic systems, and driveways when they service only the residential improvements. Normally at least one-half acre is required to contain a smaller residence and related improvements, while one acre could be considered the typical size of a site. On the other hand, there is no general rule regarding maximum sizes. Several acres may be included in an estate development with extensive grounds.

It is not always necessary to assign a separate site to every residence located on a subject property. Where several owner-occupied residence are closely grouped, it is sometimes reasonable to assume they are located on one large site rather than on separate sites. The advisability of using this unit concept will depend upon the physical proximity of the improvements, their access, and their sources of utilities.

1 Since the residence and its site are not restricted, they must be valued as a separate appraisal unit
2 as previously noted. Even though it might be highly unlikely (or impossible where local zoning
3 regulations forbid the separate parcelization and/or sale of a homesite on an agricultural property)
4 for the homesite to actually be bought and sold in the marketplace, the homesite must be valued
5 as though it were a separate appraisal unit and traded in that manner. The result is that under
6 section 51(a), the homesite will be enrolled at the lesser of its factored base year value or its fair
7 market value³². Additional discussion on this concept is provided in Part II, Chapter 4, Valuation
8 of Nonliving Improvements.

9 In determining the value of the residence and homesite, the comparative sales approach is
10 generally the only practical method of valuation available to the appraiser; however, when
11 comparable sales data are not available, property tax appraisal rules do not preclude their
12 valuation based on the income or cost approaches. In estimating site value by the comparative
13 sales method, the appraiser should consider all of the attributes of the subject site just as in the
14 appraisal of a separate parcel.

15 A special base year problem is created when a new homesite is developed on a restricted property,
16 thereby changing a portion of the property's use from agricultural to residential. The question
17 then becomes, what base year should be assigned to the portion of land developed into the
18 residential site? There has been no change in ownership that would warrant a reappraisal of the
19 site, yet new construction such as grading has been performed that has brought about a change in
20 use.

21 The California Code of Regulations, Property Tax Rule 463, subdivision (b)(2), defines "newly
22 constructed" or "new construction" to mean and include:

23 Any substantial physical alteration of land which constitutes a major rehabilitation
24 of the land or results in a change in the way the property is used. . . In any instance
25 in which an alteration is substantial enough to require reappraisal, only the value of
26 the alteration shall be added to the base year value of the preexisting land or
27 improvements. Increases in land value caused by appreciation or a zoning change
28 rather than new construction shall not be enrolled, . . . (Emphasis added.)

29 Therefore, while the value added by the physical alteration is assessable, the value attributable to
30 the change in use is not assessable. Any physical changes such as driveway, grading, domestic
31 well, etc., associated with the newly created site should be assessed as new construction and
32 assigned a base year as of the date of completion. However, the underlying land cannot be
33 reassessed, and should retain the same base year as the larger parcel on which the site is located.
34 The base year value allocation has to be made as of the last actual change in ownership.

35

³² Since a homesite located on land under a CLCA contract is not subject to the valuation restrictions applied to the land and is treated as a separate appraisal unit, an owner may appeal the homesite value just as one can appeal the value of any other appraisal unit for purposes of a decline in value (i.e., Proposition 8).

1

2 **Example**

3 Assume that a 160-acre parcel with no improvements transferred in September ~~1986~~1991. In July
4 ~~1996-2001~~ construction is completed on a new residence and the appraiser determines that the
5 appropriate size for the site is one acre.

6 In this situation, the base year value of the newly created site should be established based on the
7 value of comparable one-acre homesites in ~~1986~~1991. If it is determined that the proper ~~1986~~
8 ~~1991~~ value is \$50,000, this becomes the base year value for the homesite. The value of any new
9 construction for items such as driveway, grading, domestic well, etc., should be added to the
10 \$50,000 (plus appropriate factoring) site value.

CHAPTER 6: VALUATION OF MINERAL DEPOSITS

Section 427 of the Revenue and Taxation Code provides an exception to the general rule regarding assessment of land subject to an enforceable open-space restriction. The section provides that the open-space valuation methods shall not prevent an assessor from considering the existence of mines, minerals, and quarries on the land being valued.

The proper method of valuing open-space land that contains valuable mineral deposits (including oil, natural gas, sand and gravel, ores of various types, and geothermal energy) is to determine the open-space value of the surface use of the land by the capitalization of income method as prescribed in section 423, and add to it the taxable value of any valuable mineral rights. When the development of mineral resources would disrupt the surface use, an appropriate adjustment should be made to the income attributed to the surface rights prior to capitalization. It is important to recognize that taxable mineral rights must be valued as unrestricted property.

The procedures for appraising and assessing of mineral rights are very unique compared to most other property types. For this reason, there are separate statutes and rules which govern the valuation of the major categories of minerals. In addition, because minerals constitute subsurface interests in property, the mere discovery of the physical existence of minerals does not create a taxable event, even though the market may believe that value exists. Rather, the market value of a mineral property interest is determined by estimating the value of the "proved reserves" of the specific mineral or geothermal energy involved. On the other hand, mineral companies execute leases with landowners for exploration of mineral deposits; such a lease is a change in ownership and the assessor should assess the "right to explore" created by the lease.

Assessors' Handbook Section 566, *Assessment of Petroleum Properties—(1996)*, provides guidance for the appraisal and assessment of oil and gas properties (California Code of Regulations, Property Tax Rule 468). Assessors' Handbook Section 560, *Assessment of Mining Properties—(1997)*, covers mining properties including sand and gravel (California Code of Regulations, Property Tax Rule 469).

Rule 473 governs the assessment of geothermal rights. Although there is no handbook section for geothermal properties, since geothermal energy is similar to petroleum in that it is fluid, but it is similar to mining properties in that there is usually a very lengthy development period prior to production, AH 566 and AH 560 in combination provide guidance on many of the appraisal and assessment issues associated with geothermal properties.

CHAPTER 7: TOTAL PROPERTY VALUE

The total appraised value of a rural property subject to open-space restrictions is the sum of the restricted value of the land and any restricted living or nonliving improvements, and the lesser of base year value or current market value of any unrestricted nonliving improvements, minerals, and residential sites. Although the basic components of the total property value are well established, some aspects of the total property appraisal procedure require further clarification.

ALLOCATION OF VALUE

When a restricted rural property is composed of more than one parcel and the various parcels have different income-producing potentials, it is essential for appraisal accuracy to appraise each parcel of land according to its capability rather than valuing each parcel on the basis of the average income generated by the total property. Similarly, areas of significantly different capability within a parcel should be defined, and each area's income should be separately estimated and recorded to support the parcel's total land value.

By the same logic, the base year value of improvements located on a specific parcel should be included in the appraisal of that parcel even if the return *on* and *of* these improvements has been subtracted from the gross income of a larger service area.

Proper allocation of all base year values is extremely critical in the event a parcel is sold or an improvement is removed or destroyed. If the base year value allocated to a specific parcel is incorrect and the parcel is sold, the base year values for the remaining parcels will be incorrect and may result in incorrect taxable values.

VALUATION OF NONRESTRICTED PORTIONS OF AGRICULTURAL UNITS

Any portion of a rural property not subject to an enforceable restriction that qualifies as open-space land under sections 421 through 422.5 must be valued according to the factored base year or current market value concept of article XIII A. The primary appraisal problem in valuing a nonrestricted portion of a larger parcel which is restricted, is the determination of the unit to be appraised. The question is whether the unrestricted portion should be valued as a separate unit or as a part of the larger property. For example, if 960 acres of a 1,000 acre farm are under a California Land Conservation Act contract, the appraiser must determine whether the remaining 40 acres should be appraised at a value that is consistent with other 40 acre nonrestricted parcels, or appraised as a portion of a 1,000 acre farm.

The property owner may have various motives for not restricting part of the property. For example, if the unrestricted land is producing a high income, the owner may not receive any material benefit from the open-space program. Alternatively, if a portion of the property has a potential use higher and better than agriculture, the owner could not realize the benefits of

1 conversion to this higher use were the property's use restricted. In some cases, the use of both
2 portions may be the same and the division is the personal preference of the owner.

3 In actuality, the owner's reasons for not restricting a portion of the property are immaterial. The
4 unrestricted portion should always be valued as a separate unit. The contractual separation by
5 implication creates a different potential use between the restricted and unrestricted portions and a
6 different potential market value for each portion of the property. The contract has, in effect,
7 created a separate unit for appraisal purposes. The value that the unrestricted portion adds to the
8 total property value is, in all probability, its value as a separate parcel because it has retained its
9 full property rights and the owner can sell it separately. In many counties, open-space regulations
10 require such unrestricted property to be separately parceled, but this appraisal procedure is
11 applicable even where separate parcels are not required.

12 **ASSESSMENT LIMITATIONS**

13 Sections 423(d) and 423.3 contain provisions for limiting the assessed values of open-space
14 properties. Section 423(d) provides that, unless a party to the contract expressly prohibits such a
15 valuation, the current taxable value of the property cannot exceed the lower of the current
16 restricted value, the current market value, or the factored base year value of the property as if
17 unrestricted. This limitation applies to all restricted portions of the property, i.e., land, perennials,
18 and nonliving improvements if they are restricted via the terms of the contract. However, the
19 comparison is made on the basis of the total restricted value of the appraisal unit and not on the
20 basis of the restricted value of individual parcels (unless the individual parcels are separate units)
21 or on the basis of the value of each restricted component, such as land or trees.

22 For example, if a ranch is composed of three 80 acre parcels, two of which are planted to fruit
23 trees, the appraiser would compare the combined restricted values of 240 acres of land and 160
24 acres of trees to the factored base year value and current market value of the same unit.

25 Section 423.3 allows a city or county by agreement to limit assessments of land restricted by the
26 Williamson Act to a value no higher than a given percentage of the property's factored base year
27 value as if unrestricted. This limitation is applicable to restricted improvements (both living and
28 nonliving) as well as restricted land. Restricted improvements are subject to the same limiting
29 percentage as the land on which they are located. As in the case of the limitation contained in
30 section 423(d), the value to be enrolled is determined by comparing the total restricted value of
31 the appraisal unit to the factored base year value of the same unit modified by the appropriate
32 percentage, and the current market value of the unit as if unrestricted.

CHAPTER 8: VALUATION OF LAND SUBJECT TO TERMINATING RESTRICTIONS

The appropriate governmental agency, or the owner of land subject to a contract, agreement, or open-space easement may serve notice of nonrenewal as provided in sections 51091, ~~or~~ 51245, or 51296.9³³ of the Government Code. During contract nonrenewal, the land remains fully subject to the contractual restrictions and ~~no longer generally only~~ qualifies for Open Space Subvention Entitlements when the land is assessed pursuant to section 423. For nonrenewal of land subject to a Farmland Security Zone contract, however, Government Code section 16142.1(b)³⁴ provides that subventions shall "be paid for 10 years from the date that the land was first assessed pursuant to Section 426 of the Revenue and Taxation Code, if it was previously assessed under Section 423.4 of that code."³⁵ ~~Land subject to such terminating restrictions will be valued according to the procedure contained in section 426 with these exceptions: Section 426 (a) specifies:~~

- If the owner of the land serves the notice of nonrenewal, or the county or city serves the notice and the owner fails to protest as provided in sections 51091 or 51245, the specified valuation procedure prescribed in section 426 will apply immediately. Upon notice of nonrenewal, the assessor is to continue valuing the land under section 423 until the following lien date.³⁶
- If, however, the county or city serves notice and the landowner does protest, the specified valuation procedure applies when less than six years remain until the expiration of the enforceable restriction. When six or more years remain, the assessor is to continue valuing the land under section 423 until less than six years remain.

Section 426 contains specific directives concerning the valuation procedure applicable to land subject to a terminating restriction. Such land shall be valued annually by:

1. Determining the full cash value of the land according to section 110.1 (factored base year value), or, if the land will not be subject to article XIII A upon the expiration of the contract, according to section 110 or other special restricted assessment provided for in the law;
2. Determining the restricted value of the land by the capitalization of income method specified for open-space land as provided in section 423;
3. Subtracting the restricted value from the value determined in 1 above;

³³ Statutes of 2000, Chapter 506 (Senate Bill 1350).

³⁴ Statutes of 1999, Chapter 1019 (Senate Bill 649).

³⁵ The appropriation authorized by this subdivision shall not exceed \$100,000 per year until 2005.

³⁶ Sections 423 and 439.2 provide for calculation of values on an annual basis only. There is no provision for calculation of a restricted value at a time other than the lien date. Thus, unlike statutes implementing article XIII A, which provide for supplemental assessments for changes in ownership and new construction, there is no immediate reassessment for a restricted property either when it becomes subject to a contract or when a notice of nonrenewal is given during the year.

1 4. Discounting the difference between the restricted value and the value determined in 1 for
 2 the number of years remaining until the termination of the enforceable restriction at the
 3 interest rate announced by the State Board of Equalization on by September 1 pursuant to
 4 subdivision (b)(1) of section 423; and

5 5. Adding this discounted value to the open-space value determined in 2 above.

6 Note that the discount rate is only the interest rate announced by the State Board of Equalization
 7 and does not contain the risk and tax components that are included in the open-space
 8 capitalization rate. The discounting period is the number of years remaining until the termination
 9 of the enforceable restriction. Therefore, the first computation after a notice of nonrenewal will
 10 be for a term of nine years (unless a governmental notice is protested by the property owner), and
 11 this term will decrease for each succeeding computation.

12 As an example of this procedure, assume that the factored base year value of a parcel of land that
 13 will be subject to article XIII A following termination after nonrenewal is \$5,000 per acre. The
 14 restricted value of this land is \$1,000 per acre, the remaining term of the restriction is nine years,
 15 and the open-space interest rate last announced by the State Board of Equalization is 7 percent.
 16 The computation of the restricted land value for the first year of nonrenewal would be:

17		
18	Per Acre Factored Base Year Value	\$5,000
19		
20	Per Acre Restricted Value	\$1,000
21		
22	PW 1 Deferred 9 Years @ 7%	0.543934
23		
24	0.543934 (\$5,000 - \$1,000) + \$1,000	<u>\$3,175 Per Acre</u>
25		

26 If the factored base year value and the restricted value of the land are the same, no discounting is
 27 necessary.

28 Under certain circumstances it is possible for the value calculated pursuant to section 426 to
 29 exceed the factored base year value or the current market value. Since article XIII A sets the
 30 upper limit on the taxable value of real property at the lesser of its factored base year value or its
 31 current market value, in the above described situation the appraiser should enroll the lower of the
 32 factored base year value or current market value. Example I below illustrates this point.

33 **EXAMPLE I**

34 A farm is restricted by a California Land Conservation Act contract and the property owner has
 35 filed a notice of nonrenewal. The current market value of the land is \$3,000 per acre, the factored
 36 base year land value is \$4,100 per acre, and the current value by the capitalization of income
 37 method is \$2,100 per acre. The computation of the restricted land value for the first year of
 38 nonrenewal would be:

1	Per Acre Factored Base Year Value	\$4,100
2	Per Acre Restricted Value	\$2,100
3	PW 1 Deferred 9 Years @ 7%	0.543934
4	0.543934 (\$4,100 - \$2,100) + \$2,100	<u>\$3,187</u>

5 Since the value resulting from the section 426 calculation exceeds the current market value, the
 6 proper taxable value for the restricted property is the current market value of \$3,000 per acre.

7 Finally, the appraiser is faced with a unique valuation problem when the city or county has
 8 implemented the provisions of section 423.3 requiring a comparison of the current restricted value
 9 to a percentage of the factored base year value and enrolling the lower. Since section 426 does
 10 not specifically refer to section 423.3, the value determined under section 423.3 does not enter
 11 into the nonrenewal valuation process. Even if section 423.3 is applicable, the value to enroll
 12 during the nonrenewal period is the lower of the section 426 value, current market value, or
 13 factored base year value. The comparison must be made annually during the period of
 14 nonrenewal. Example II below demonstrates the proper procedure.

15 **EXAMPLE II**

16 Assume that a parcel of land subject to a California Land Conservation Act contract is under
 17 nonrenewal and has a current market value of \$3,000 per acre, a factored base year value of
 18 \$2,500 per acre, and a capitalization of income method value of \$1,900 per acre. In addition, the
 19 county has adopted the provisions in section 423.3, and the taxable value for this property
 20 without consideration of the nonrenewal process would be 70 percent of the factored base year
 21 value, or \$1,750 per acre. The computation of the restricted land value for the first year of
 22 nonrenewal would be:

23	Per Acre Factored Base Year Value	\$2,500
24	Per Acre Restricted Value	\$1,900
25	PW 1 Deferred 9 Years @ 7%	0.543934
26	0.543934 (\$2,500 - \$1,900) + \$1,900	<u>\$2,226</u>

27 Since the provisions of section 423.3 do not pertain to property subject to nonrenewal, the taxable
 28 value of the property is \$2,226 per acre, and not \$1,750 per acre.

29 When trees, vines, or nonliving improvements are subject to terminating restrictions, the interim
 30 values are determined in the manner specified for land.

CHAPTER 9: CANCELLATION PROCEDURES

1
2 Sections 51280 through 51287~~5~~ of the Government Code (known collectively as article 5 of
3 chapter 7 of the Government Code) govern the cancellation of open-space contracts. ~~Subsequent~~
4 ~~legislation has modified several provisions of this article. Government Code section 51297~~
5 ~~applies to a petition for cancellation of a Farmland Security Zone (FSZ) contract.~~

6 Government Code section 51283 requires the county assessor to determine a "cancellation value"
7 of the land for the purpose of determining a cancellation fee. ~~In accordance with current law,~~
8 ~~the~~The cancellation value is the current fair market value of the land as if unrestricted. ~~The~~
9 ~~county assessor must certify this cancellation value to the board or council so that the cancellation~~
10 ~~fee can be determined. The cancellation fee will be an amount equal to 12 1/2 percent of the~~
11 ~~current fair marketcancellation value for open space contracts and 25% of the cancellation value~~
12 ~~for FSZ contracts. Government Code section 51240 allows cities and counties to include in their~~
13 ~~open-space contracts restrictions, terms, and conditions, including payments and fees, that are~~
14 ~~more restrictive than those set forth in governing statutes. The county assessor must certify this~~
15 ~~cancellation value to the board or council so that the cancellation fee can be determined.~~

16 Under the conditions set forth in Government Code section 51283, the board or council has
17 authority to waive payment of the cancellation fee, subject to the approval of the Secretary of the
18 Resources Agency. ~~This provision, however, does not apply to land subject to a FSZ contract~~
19 ~~pursuant to Government Code section 51297(a)(3). In other words, the board or council has no~~
20 ~~authority to waive payment of the cancellation fee for land subject to a FSZ contract.~~

CHAPTER 10: VALUATION OF WILDLIFE HABITATS

In 1973 the Legislature added "wildlife habitat contracts" to the list of open-space enforceable restrictions set forth in section 422. Generally, lands subject to wildlife habitats are valued under section 423.7. Legislation enacted in 1996, in essence, created a second valuation procedure, under section 423.8, for certain land subject to wildlife habitat contracts.

Wildlife habitats are defined in subsection (f) of section 421 (as amended in 1996) which provides as follows:

"Wildlife habitat contract" means any contract or amended contract or covenant involving, except as provided in Section 423.8, 150 acres or more of land entered into by a landowner with any agency or political subdivision of the federal or state government limiting the use of lands for a period of 10 or more years by the landowner to habitat for native or migratory wildlife and native pasture. These lands shall, by contract, be eligible to receive water for waterfowl or waterfowl management purposes from the federal government.

The second valuation method for wildlife habitats under section 423.8, upon the request of the owner, makes wildlife habitats immune to the requirement that at least 150 acres be involved in the contract. Further, these habitats are to be valued in accordance with section 402.1.

VALUATION PROCEDURES UNDER SECTION 423.7

The primary method of valuing lands subject to wildlife habitat contracts in section 423.7 is not the capitalization of income method used in valuing other restricted land, but a limited comparative sales approach. These lands are valued by ". . . using the average current per-acre value based on recent sales including the sale of an undivided interest therein, of lands subject to a wildlife habitat contract within the same county." See section 423.7(a).

Under section 423.7(b), sales of less than 150 acres cannot be used unless the sale is of an undivided interest of land subject to a wildlife habitat contract. Where ownership of such open space lands is held by a corporation and the principal asset of the corporation is the land, bona fide sales of stock or memberships shall be treated as sales of open-space lands. The assessor must determine the average per-acre sale price in the county each year. This price is multiplied by the number of acres held under each single ownership of property qualifying for this treatment to determine the current total restricted value of each property.

The average per-acre value for all lands under wildlife habitat contract is determined by dividing the total sale price of all recently sold lands subject to these contracts by the total number of acres in the sold properties. Since improvements are not subject to restricted valuation procedures, the current market value of any improvements located on a sold property must be subtracted from the sale price prior to computing the average per-acre land value. The lesser of factored base year value or current market value of any improvement is added to the restricted land value in the total property appraisal. Similarly, if the land is subject to indebtedness, the amount of the

1 indebtedness should be added to the nominal sale price of the land prior to computing the average
2 per-acre land value.

3 It is important to recognize that any qualifying property automatically receives this treatment
4 without the approval of the county or city. However, a qualifying property is automatically
5 disqualified from preferential assessment if the owner of the property fails to provide the county
6 assessor each year with a schedule of sales of the property, including individual interests, that
7 have occurred during the previous four years.³⁷

8 Although the hunting clubs that utilize the wildlife habitats may require membership fees and
9 various annual charges, such fees cannot be capitalized into additional real property value. The
10 operation of the clubs is separate from the real property ownership.

11 The method of valuing land subject to a terminating wildlife habitat contract differs from the
12 procedure prescribed for lands under other types of open-space restrictions. Where less than ten
13 years remain until the expiration of a wildlife habitat contract and where the factored base year
14 value of the land is greater than the restricted value determined by the prescribed method, a pro
15 rata share of the amount of the difference shall be added to the restricted value in equal annual
16 installments. In other words, ~~each year~~ the difference between the factored base year value and
17 the current unadjusted restricted value is calculated, divided by 10, and the quotient multiplied by
18 the number of years that have elapsed in the ten-year termination period. This amount is added to
19 the restricted value ~~each year over the remaining term of the contract.~~

20 Section 423.7(k) places a limitation on the taxable value of properties enforceably restricted as
21 wildlife habitats. Specifically, unless a party to an instrument which created the enforceable
22 restriction expressly prohibits the valuation, the value resulting from the method described in this
23 section shall not exceed the factored base year value of the property as if it were not restricted.

24 **VALUATION PROCEDURES UNDER SECTION 423.8**

25 Under section 423.8, the method of valuing lands of less than 150 acres subject to wildlife habitat
26 contracts is ~~contained that prescribed~~ in section 402.1. As with other open-space properties, the
27 assessor must consider the effect upon value of any enforceable restrictions to which the use of
28 the land may be subjected. Section 402.1(b) states:

29 There is a rebuttable presumption that restrictions will not be removed or
30 substantially modified in the predictable future and that they will substantially
31 equate the value of the land to the value attributable to the legally permissible use
32 or uses.

33 The assessor cannot consider sales of comparable land not similarly restricted to the subject
34 property unless there is convincing evidence that the restriction will be removed or substantially
35 modified in the predictable future.

³⁷ Section 423.7(i), Revenue and Taxation Code.

CHAPTER 11: WETLANDS MITIGATION BANKING

BACKGROUND

"Wetlands" are defined by the U.S. Environmental Protection Agency (USEPA) regulations as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."³⁸ Formal protection of wetlands and mitigation of the adverse impacts on them began in 1991, when President Bush issued an Executive Order stating that the government's objective was "no net loss" of any wetlands. The subsequent enactment of regulations by USEPA led to the following requirements on all property owners seeking to obtain the necessary permits from governmental agencies to develop their lands: 1) avoid and/or reduce to de minimis any impacts to comply with the "no net loss" objective; or 2) mitigate any impacts that are unavoidable, by either purchasing existing wetlands nearby and preserving them into perpetuity, or by creating nonexistent wetlands nearby and similarly preserving them.

Pursuant to section 404 of the Clean Water Act, which amended the Federal Water Pollution Control Act of 1977, any development of real property that adversely affects wetlands must be authorized in advance through a "Section 404" permit. Permit applicants must establish, in sequence, that: 1) steps were taken to avoid wetland impacts where practicable (i.e., impacts to aquatic resources cannot be avoided), 2) efforts were made to minimize potential impacts to wetlands (e.g., through modification of construction plans and designs), and 3) compensation for unavoidable impacts have been made (e.g., through activities to restore or create wetlands). If impacts are unavoidable, compensation is usually required to mitigate the loss of wetland functions.

The most common method of compensation involves obtaining permits for proposed wetland impacts through relevant federal, state, and local authorities and then constructing compensatory wetlands on or adjacent to the development project site. Another method of compensating for lost wetlands is the purchase of credits from wetlands mitigation banks. "Wetlands mitigation banking" was developed under the Clean Water Act³⁹ to fulfill the requirement of mitigating any unavoidable impacts. Wetlands mitigation banking is a land management tool, which provides turnkey compensatory mitigation activities as an alternative to other lawful methods of mitigating project impacts for unavoidable wetland losses caused by development. With wetlands mitigation banking, an off-site alternative for mitigation is available with pre-approved mitigation design criteria. The uncertainty of time and costs associated with finding a wetlands mitigation site, obtaining design approval, and complying with five to ten years of post construction monitoring is eliminated by purchasing credits from an approved wetlands mitigation bank.

³⁸ 40 C.F.R. sec. 230.41

³⁹ 33 U.S.C. sections 1344 et seq.

1 Wetlands mitigation banks are large tracts of land on which efforts are undertaken to create,
2 restore, enhance and/or preserve fully functioning ecosystems in advance of permitted impacts to
3 sensitive habitats. The purpose of wetlands mitigation banking is to authorize (through permitting
4 by the Army Corps of Engineers) government agencies and/or private entrepreneurs to place an
5 approved amount of acreage or tracts of wetlands in "banks." Based upon the type, size, and
6 function of the improvements, banks are authorized to sell a certain number of "credits." Banks
7 are authorized to sell these credits to landowners, developers, or governmental agencies to offset
8 impacts on sensitive habitats affected by development.⁴⁰ As landowners buy blocks of wetlands
9 (credits), the credits are drawn down against the mitigation bank. Once the amount of credits
10 reaches a zero balance, the wetlands bank is dedicated to a government resource agency (i.e., a
11 park agency) or to a non-profit conservation association.

12
13 Recognizing that the purchase of existing wetlands was a practical impossibility in most cases, the
14 Legislature adopted the Sacramento-San Joaquin Valley Wetlands Mitigation Bank Act of 1993,
15 codified in Fish and Game Code sections 1775, et seq., in order to provide an additional
16 alternative of creating new offsite mitigation banks. Its stated purpose was to achieve the "no net
17 loss" objective in the Sacramento-San Joaquin Valley region. Consistent with federal law, Fish
18 and Game Code section 1777.2 provides that the "bank site" or "mitigation bank site" shall be a
19 publicly or privately owned and operated site on which wetlands have been or will be created and
20 per Fish and Game Code section 1779, be not more than 40 miles from a qualifying urban area.
21 Funding to cover the costs of the site is provided through the sale of credits to land owners,
22 which are required to mitigate wetlands loss from their development. Fish and Game Code
23 section 1777.5 defines the credits assigned to any such site as "a numerical value that represents
24 the wetland acreage and habitat values of a mitigation site."

25
26 Any person desiring to establish or create a wetlands mitigation bank site must apply to the
27 Department of Fish and Game for a determination that both the bank site and the operator qualify
28 under numerous criteria found in all applicable statutes and regulations. Before any bank site may
29 be created, the Department of Fish and Game must coordinate and execute a memorandum of
30 understanding with the operator (as well as other state, federal, and local agencies), which
31 includes the following: 1) describes the site boundaries, 2) identifies the wetland acreage that
32 qualifies to be credited against the development of any wetlands within 40 miles (i.e., identifying
33 the number of credits), 3) states the maintenance requirements, 4) establishes a trust fund or
34 bond in favor of the Department to provide funds for maintaining the bank site in perpetuity, and
35 5) sets forth the causes for breach of the agreement.

36
37 The Act provides no property tax exclusions or exemptions for the creation or maintenance of the
38 bank sites. In fact, annual taxes are required to be included in the cost of any wetland credit even
39 if the bank site owner is a government entity. Pursuant to Fish and Game Code section 1787,
40 where the bank site owner is a public entity, it shall pay annually to the county where the property

⁴⁰ There are two types of wetlands mitigation banks in this context. A dedicated wetlands mitigation bank is a tract of wetlands approved as a mitigation bank for one specific user, such as Cal-Trans, which is constructing a large amount of new improvements in a particular area. A commercial wetlands mitigation bank is a tract of wetlands approved as a mitigation bank for the purpose of selling its available credits to anyone.

1 is located, an amount in lieu of the property taxes (including special assessments) levied on the
 2 property at the time the bank site is transferred to the entity.

3
 4 Upon successful completion of at least 20 acres of qualifying new wetlands, the operator may
 5 apply to the Department for its determination of the amount of credits available for sale.⁴¹ The
 6 Department makes such determination based on established biological criteria listed in Fish and
 7 Game Code section 1791, and may set a minimum price for credits sufficient to insure the
 8 financial integrity of the bank site, although the operator may charge a higher price.⁴² No credit
 9 shall be provided for wetland acreage that was already in existence prior to establishment of the
 10 bank.⁴³

11
 12 Under Fish and Game Code section 1792, the following factors must be used by the Department
 13 in verifying that the minimum value of the credit equals "the average cost for each wetland acre
 14 created:"

- 15
 16 a) land costs (including interest)
 17 b) wetland creation costs
 18 c) wetland administration, maintenance, protection costs
 19 d) annual taxes, including the in-lieu payments for property taxes under section 1787, if
 20 applicable
 21 e) costs incurred by the Department in establishing and monitoring the bank site
 22 f) any other costs for preserving the wetlands in perpetuity

23
 24 While the forgoing factors constitute the minimum value of a credit, as indicated, Fish and Game
 25 Code section 1792 also specifically provides that the operator may charge a higher price. The
 26 operator executes a separate agreement for the sale of wetland credits to a particular "permittee"
 27 (the public or private developer seeking a permit to remove or fill wetlands). Standard conditions
 28 of such agreements provide that the credits sold are non-transferable and non-assignable and do
 29 not transfer to the permittee any real property rights, i.e. rights to possess, own, use, or hold a
 30 security interest in the actual bank site, to which the credits relate. Thus, once the "permittee"
 31 makes full payment for the purchase of credits in the bank site, there is no further obligation to the
 32 operator of the bank site, unless the permittee has contracted for an equity involvement in the
 33 bank.⁴⁴

34
 35 Pursuant to Fish and Game Code sections 1779 and 1779.5, the Sacramento-San Joaquin Valley
 36 Wetlands Mitigation Bank Act of 1993 only applies to wetlands mitigation banks in the "central
 37 valley region," as defined in subdivision (g) of section 13200 of the Water Code. No other
 38 legislation has been passed or regulations adopted that have addressed the specific requirements
 39 of wetlands mitigation banks in other regions of the state. In general, wetlands mitigation banks
 40 can be created throughout the state with details negotiated on a case by case basis between the

⁴¹ Fish and Game Code section 1790.

⁴² Fish and Game Code section 1792.

⁴³ Fish and Game Code section 1790.

⁴⁴ Fish and Game Code section 1796.

1 appropriate public agencies and the bank sponsor. For more information on wetlands mitigation
2 banks (e.g., Sacramento-San Joaquin Valley Wetlands Mitigation Bank Act of 1993,
3 Supplemental Policy Regarding Conservation Banks, State of California's Official Policy on
4 Conservation Banks, and the California Wetlands Conservation Policy) see the California
5 Department of Fish and Game Web site at www.dfg.ca.gov or call the Department's Habitat
6 Conservation Planning Branch at (916) 653-4875.

7 ASSESSMENT ISSUES

8 **Change in ownership.** Wetlands credits do not constitute taxable fee interests in real property,
9 the conveyance of which results in change in ownership and reappraisal. The issue is whether the
10 purchase of a credit constitutes "a transfer of a present interest in the real property, including the
11 beneficial use thereof, the value of which is substantially equal to the value of the fee interest," per
12 section 60. This is a fact-driven determination requiring an analysis of the particular "right" being
13 transferred and whether it is part of the "bundle of rights" meeting the test of section 60.

14 Wetlands credits do not transfer any part of the bundle of rights arising from the ownership of a
15 wetlands mitigation bank site to a permittee. Nothing in the wetlands mitigation statutes indicates
16 that the conveyance of wetlands credits to a permittee constitutes a transfer of rights that would
17 meet the change in ownership test of section 60. Furthermore, as an expressed standard condition
18 in an agreement to sell wetlands credits, the credits sold are non-transferable and non-assignable
19 and do not transfer any real property rights to a permittee.

20 A purchaser of wetlands credits must purchase these credits as a prerequisite for development, but
21 the seller ("bank") continues to own the wetlands. The seller of wetlands credits, a wetlands
22 mitigation bank, does not lose an unused "right" as the result of selling wetlands credits. In fact, a
23 wetlands mitigation bank benefits from the sale of wetlands credits, as the sales proceeds cover
24 the costs of the mitigation bank site. Additionally, wetlands are not identifiable to a specific
25 purchaser's property but to the "bank" and the development of wetlands are therefore assessable
26 "new construction" on the seller's bank site. As such, the transfer of wetlands credits should not
27 be treated as an appraisable event, since the wetlands remain assessable to the seller ("bank").

28 In summary, the transfer of wetlands credits does not represent the transfer of a present interest in
29 real property, but is comparable to offsite improvements adding value to the land. Thus, the
30 transfer of credits should not be treated as an appraisable event.

31 **New Construction.** Section 70(a) defines "new construction" as either (1) any addition to real
32 property, whether land or improvement (including fixtures), since the last lien date; or (2) any
33 alteration of land or of any improvement (including fixtures) since the last lien date which
34 constitutes a major rehabilitation thereof or which converts the property to a different use.
35 Rule 463(b)(2) further provides that new construction means and includes "any substantial
36 physical alteration of land which constitutes a major rehabilitation of the land or results in a
37 change in the way the property is used." Examples of alterations to land to be considered "new
38 construction" are land fill, retaining walls, site development for use under another purpose,

1 altering rolling, dry grazing land to level irrigated cropland, etc. (See also examples in Assessors'
 2 Handbook Section 502, *Advanced Appraisal*, Chapter 6, Table 6-2: Common Types of New
 3 Construction.) Subparagraph (A) of Rule 463(b)(2), states that in any instance where the
 4 alteration is substantial enough to require reappraisal, only the value of the alteration shall be
 5 added to the base year value of the pre-existing land. Increases in value caused by appreciation
 6 (or a zoning change) rather than the new construction shall not be enrolled.⁴⁵

7 By definition, the creation of a wetlands mitigation bank site falls within the foregoing statute and
 8 rule as "substantial physical alteration of land which constitutes a major rehabilitation of the land."
 9 The express purpose of the Sacramento-San Joaquin Valley Wetlands Mitigation Bank Act in Fish
 10 and Game Code section 1781 is to increase the total wetlands acreage and values within this
 11 region. As noted, Fish and Game Code sections 1778 through 1787 establish the approval
 12 process and criteria for obtaining a permit to create a bank site. Fish and Game Code section
 13 1792 lists cost items involved in the creation, construction, and maintenance of a bank.
 14 Moreover, Fish and Game Code section 1790 states that no credit shall be provided for wetlands
 15 acreage that was *already in existence*. Thus, wetlands acreage created under the Act is "new
 16 construction," in that it was not a pre-existing wetlands site, but was used for some other purpose
 17 (presumably undeveloped, agricultural, or open space). The creation of wetlands acreage from
 18 such agricultural or open space acreage would also represent a change in use, per Rule 463(b)(2).
 19 Fish and Game Code section 1784 prescribes the type and extent of the "new construction" to be
 20 completed in order to preserve the site for use as wetlands acreage in perpetuity. Examples of
 21 items that require new construction include the following: a reliable water supply, proper grades
 22 and soil preparation for vegetation and specified wildlife, ponds, foliage, and permanent
 23 conversion into a naturally occurring wetland system. Based on these parameters, the wetlands
 24 acreage created is assessable under section 70(a)(2) and Rule 463(b)(2).

25 In contrast, a bank site that was previously classified and protected by the Department of Fish and
 26 Game, by the United States Environmental Protection Agency, or by the Army Corp of Engineers
 27 as wetlands would not be considered newly constructed property, assuming there is no substantial
 28 alteration to the land or change in use. Based on the provisions in Fish and Game Code sections
 29 1775 through 1796, facts demonstrating that a specific bank site is newly constructed would be
 30 shown on the permit and the memorandum of agreement executed by the Department.

31 **Valuation.** On any lien date, the taxable value of a wetlands mitigation bank should be the lower
 32 of (1) its adjusted base year value, including any value added for new construction completed in
 33 the process of forming the wetlands area, or (2) its current market value, taking into account the
 34 restrictions on use and the eventual depletion of revenues from the sale of credits. It should be
 35 noted here that the sale price of the "wetlands credits" may be one of the indicators of value with
 36 respect to the full economic costs necessary to construct the wetlands and ready it for its intended
 37 use. Thus, some or all of the sale price of the wetlands credits may reflect portions of the direct
 38 costs, the indirect costs, or the entrepreneurial profit of the project, as discussed in Assessors'

⁴⁵ Revenue and Taxation Code section 71.

1 Handbook Section 502, *Advanced Appraisal*, Chapter 2, under the heading of "Valid
2 Components of Cost."
3
4 Since the Bank is subject to permanent enforceable governmental restrictions in exchange for
5 approval to create the wetlands and to obtain wetlands credits for the wetlands acreage in the
6 bank, the provisions of section 402.1 are applicable, and some adjustments to value necessary.
7 These environmental restrictions are enforceable in perpetuity and the bank site is legally,
8 physically, and financially bound by such restrictions, regardless of any change in operators. In
9 the event of any breach or default by an operator, Fish and Game Code section 1786 provides that
10 the Department shall replace the operator, and/or that title to the property shall pass from the
11 owner/operator to the Department. Therefore, the assessment of any bank site must take into
12 account the effect of these restrictions, which effectively transfer to the Department the owner's
13 right to develop the site or to convert it to another use. Presumably, the mitigation bank owner
14 establishes the bank site under the burden of these restrictions based upon the knowledge that he
15 will obtain a return of and on his investment through the number and the value of the wetlands
16 credits the government allows for sale. Since the bank itself can only be conveyed subject to the
17 wetlands restrictions, the value of the wetlands acreage declines as the available credits are sold
18 and justifies a reduction in the estimation of fair market value when assessed.

1 **CHAPTER ~~11~~12: OPEN-SPACE APPRAISAL PROGRAM**

2 Although an annual valuation of all open-space properties is not specifically mandated by current
3 statutes, it is essential that all open-space property appraisals be reviewed each year, if the full
4 compliance with all the requirements of open-space law is to be achieved. Not only must
5 restricted values be adjusted to reflect changes in rates and incomes, but a comparison must be
6 made between the property's restricted value, market value, and factored base year value to
7 determine the proper value to enroll. Although this comparison is made in most counties on the
8 basis of a sampling program, the assessor should work toward establishing and maintaining
9 unrestricted base year and current market value appraisals of all restricted properties. These
10 values are also needed when restrictions are terminated.

11 Any value change to open-space properties should be the result of a reappraisal and not merely a
12 recomputation. If a new capitalization rate is applied to the previous year's estimate of economic
13 rent, the result may not be a realistic estimate of current restricted value. Economic rents and
14 depreciation schedules for living and restricted nonliving improvements should be reviewed in the
15 course of the reappraisal. In addition, should any element of the property not subject to open-
16 space valuation procedures experience a change in ownership, or if qualifying new construction
17 has occurred, that element of the property ~~effected~~-affected must be reappraised to determine its
18 new base year value.

19 The maintenance of a comprehensive appraisal program for open-space properties in
20 predominantly rural counties is a large portion of the annual assessment workload. Production
21 can be maximized by using benchmark appraisals of land and improvements, and by utilizing
22 computer assistance to the greatest degree possible.

23 The maintenance of open-space property values is a program ideally suited to computer
24 processing. Restricted values can be quickly and easily updated when changes in capitalization
25 rates or incomes occur. In addition, the computer can be programmed to produce the subvention
26 report required by section 16144 of the Government Code, an extremely time-consuming task
27 when done manually, and to make the required comparison between restricted market and
28 factored base year values. Any assessor with a substantial open-space workload should use a
29 computer-assisted appraisal program for the valuation of open-space properties.

APPENDICES

TABLE OF CONTENTS

APPENDIX 1: SUMMARY OF RELATED COURT CASES AND ATTORNEY GENERAL'S OPINIONS.....	1
COURT CASES.....	1
ATTORNEY GENERAL'S OPINIONS.....	2
APPENDIX 2: SOURCES OF AGRICULTURAL INFORMATION.....	4
APPENDIX 3: SAMPLE QUESTIONNAIRES.....	13
GLOSSARY OF TERMS.....	16

1 *Kelsey v. Colwell* (1973) 30 Cal.App.3d 590. Local participation in the Williamson Act by a city
2 or county is permissive rather than mandatory. [But see *Borel*, infra.]

3 *Lewis v. Hayward* (1986) 177 Cal.App.3d 103. Window provision allowing contract cancellation
4 under relaxed standards violated article 13, section 8, of the California Constitution.

5 *Shellenberger v. Board of Equalization* (1983) 147 Cal.App.3d 510. When determining the
6 base year value under article XIII A of land that had been in the Williamson Act at the time of its
7 base year, but had since come out, an unrestricted value rather than the market value of land in
8 the Williamson Act must be used.

9 *Sierra Club v. Hayward* (1981) 28 Cal.3d 840. Contract cancellations reserved for extraordinary
10 circumstances which could not be anticipated through contract nonrenewal. City council lacked
11 substantial evidence to support a contract cancellation.

12 *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (February 28, 1995) 33 Cal.App. 4th
13 144. Invalidated negative declaration for country club development on Williamson Act land. The
14 fact the surrounding lands were also enrolled under Williamson Act contract was inadequate to
15 support the county's conclusion that the proposed project would not induce further development
16 in the area. (At page 157.) Court declined to rule on whether the proposed project was
17 incompatible with the Williamson Act.

18 ATTORNEY GENERAL'S OPINIONS

19 **75 Ops Att'y Gen 278** (1992) When approving subdivision of land subject to a Williamson Act
20 contract, a county may require either by contract or subdivision ordinance that a previously filed
21 nonrenewal be waived and a new contract entered.

22 **69 Ops Att'y Gen 70** (1986) The term "full cash value" as used in the Williamson Act as a basis
23 for contract cancellation penalties was not affected by the change in the definition of that term for
24 general tax purposes under Proposition 13. [Note, 1987 legislation codified this opinion and
25 changed the term "full cash value" to be "current fair market value" for contract cancellation
26 purposes under Government Code sections 51203 and 51283.]

27 **68 Ops Att'y Gen 204** (1985) The failure of a Local Agency Formation Commission to hold a
28 hearing to consider a city contract protest until after the execution of the contract does not
29 invalidate the protest. [Note 1991 changes to Government Code sections 51243 and 51243.5.]

30 **67 Ops Att'y Gen 247** (1984) A contract cancellation granted under the "window" provision
31 must be consistent with the general plan.

32 **62 Ops Att'y Gen 233** (1979) The division of 1,308 acres of land under a Williamson Act
33 contract into 29 lots would violate the contract unless the proposed use of each of the lots is
34 incidental to commercial agriculture. The potential contract violation is not a basis for denying
35 the tentative map. However, the facts showing the contract violation may also provide a basis for

- 1 denial under the Map Act. Furthermore, the contract could be enforced by denial of a "public
2 report" by the Real Estate Commissioner thereby precluding development of the resulting lots
3 during the term of the contract.
- 4 **60 Ops Att’y Gen 118** (1977) The policy of the Williamson Act to preserve open space must be
5 considered by a Local Agency Formation Commission when designating spheres of influence.
- 6 **58 Ops Att’y Gen 729** (1975) Nuclear power plan may be cited within agricultural preserve only
7 if there is no other land on which it is reasonable feasible.
- 8 **56 Ops Att’y Gen 160** (1973) A county may enact eligibility limitations more restrictive than
9 those in the Williamson Act, including requiring minimum capital outlay and agricultural
10 production.
- 11 **56 Ops Att’y Gen 8** (1973) A county may amend Williamson Act contracts to decrease the
12 minimum term from 25 to 10 years.
- 13 **54 Ops Att’y Gen 90** (1971) Division of a 1,200 acre farm enrolled in the Williamson Act into
14 20 acre ranchettes would violate the Williamson Act notwithstanding 20 acre zoning.
- 15 **51 Ops Att’y Gen 80** (1968) A beneficiary’s assent is not required before entering into a
16 Williamson Act contract. However, a beneficiary who has not given assent is not subject to the
17 contract during foreclosure if the contract came after the beneficiary’s interest.
- 18 **47 Ops Att’y Gen 171** (1966) An assessor may continue to take into account the market value
19 of land enrolled in the Williamson Act where the assessor determines the development restrictions
20 are likely to be terminated in the near future. [Note, this opinion preceded enactment of article
21 13, section 10, of the California Constitution, authorizing preferential taxation of enforceably
22 restricted lands.]

1 **APPENDIX 2: SOURCES OF AGRICULTURAL INFORMATION**

2

Ag Foundation

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2300 River Plaza Drive
Sacramento, CA 9581533
www.cfaito.org

Agricultural Council of California

1225 H Street
Sacramento, CA 95814
e-mail: agricncl@aol.com

Agricultural Education Foundation

P. O. Box 6058
~~Templeton, CA 93465~~
~~Atascadero, CA 93423-6058~~
www.agleaders.org

Agriservices Foundation

648 West Sierra
Clovis, CA 93612

American Frozen Food Institute

1838 El Camino Real, Suite 202
Burlingame, CA 94010

AgTac-California Edison

6090 North Irwindale Avenue
Irwindale, CA 91702
4175 South Laspina St.
Tulare, CA 93274
www.scebiz.com

Alliance for Food and Fiber

10866 Wilshire Boulevard, Suite 550
Los Angeles, CA 90024
www.alliance-food-fiber.org

Alliance of Western Milk Producers

980 Ninth Street, 16th Floor

American Crop Protection Association

1156 15th Street, NW, Suite #400
Washington, D.C. 20005
www.acpa.org

American Farm Bureau Federation

600 Maryland Avenue, SW, Suite 800
Washington, D.C. 20024
www.fb.com

American Farmland Trust

~~1920 N Street, NW #400~~
~~Washington, D.C. 20036~~
California Field Office
260 Russell Avenue, Suite D
Davis, CA 95616
www.farmland.org

American Farmland Trust

Visalia Field Office
1324 West Center Street
Visalia, CA 93291

American Vineyard Foundation

P. O. Box 414 5779
~~Oakville, CA 94562~~
Napa, CA 94581
www.avf.org

Apricot Producers of California

2125 Wylie Drive, Suite 2-A
Modesto, CA 95355

Associated Independent Dairies of America

502 Mace Boulevard, Suite 12

1225 H Street, Suite 102
 Sacramento, CA 95814-2736
 e-mail: milkjet@aol.com

Allied Grape Growers
 3475 West Shaw Avenue, Suite 103
 Fresno, CA 93711

Almond Growers Council
Almond Hullers' Processing Association
 3900 Braeburn Drive
 Bakersfield, CA 93306
 2350 Lecco Way
 Merced, CA 95340
www.ahpa.net

~~**Almond Hullers and Processors**~~
 3900 Braeburn Drive
 Bakersfield, CA 93306

California Apricot Advisory Board
 1220 N Street, Suite A-247
 Sacramento, CA 95814

California Artichoke Advisory Board
 10719 Merritt Street
 Castroville, CA 95012
www.artichokes.org

California Asparagus Commission
 4565 Quail Lakes Drive, Suite A-1
 Stockton, CA 95207

California Association of Limegrowers
 823 Ridge Drive
 Fallbrook, CA 92028

California Association of Nurserymen
~~4620 Northgate Boulevard, Suite 155~~
3947 Lennane Drive, Suite 150
 Sacramento, CA 95834

Davis, CA 95616

Blue Diamond Growers
 P. O. Box 1768
1802 C Street
 Sacramento, CA 95812
California Alfalfa Seed Production
Advisory Research Board
 531-D North Alta Avenue
 Dinuba, CA 93618
 e-mail: monfortms@aol.com

California Apple Commission
 5060-4974 East Clinton Way, Suite 10125
 Fresno, CA 93727
www.calapple.com

California Beet Growers Association, Ltd.
 2 West Swain Road
 Stockton, CA 95207-4395

California Canning Peach Association
 3685 Mt. Diablo Boulevard, Suite 200
 Lafayette, CA 94549
2300 River Plaza Drive, Suite 110
 Sacramento, CA 95833
www.calpeach.com

California Cantaloupe Advisory Board
 531-D North Alta Avenue
 Dinuba, CA 93618
 e-mail: monfortms@psnw.com

California Cattlemen's Association
 1221 H Street
 Sacramento, CA 95814

California Celery Research Advisory Board
 531-D North Alta Avenue
 Dinuba, CA 93618

www.can-online.org

e-mail: monfortms@psnw.com

California Association of Wheat Growers

P. O. Box 255545
Sacramento, CA 95865-5545
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California Chamber of Commerce

Agricultural Committee
1201 K Street, 1214th Floor
Sacramento, CA 95814
www.calchamber.com

California Association of Winegrape Growers

225 30th Street, Suite 306
555 University Avenue, Suite 250
Sacramento, CA 9581625
www.cawg.org

California Cherry Marketing Program Advisory Board

California Cherry Export Association
P.O. Box 877
33 East Oak Street
Lodi, CA 95240841
www.calcherry.com

California Avocado Commission

1251 East Dyer Road, Suite 200 210
Santa Ana, CA 92705-6505
www.avocado.org

California Citrus Mutual

512 North Kaweah Avenue
Exeter, CA 93221-1200
www.cacitrusmutual.com

California Bean Growers Association

27431 Highway 33
Newman, CA 95360

California Citrus Quality Council

~~1575 South Valley Vista Drive, Suite 130~~
~~Diamond Bar, CA 91765-3914~~
210 Magnolia Avenue, Suite 3
Auburn, CA 95603
e-mail: jpeltier@cwo.com

California Beef Council

~~551 Foster City Boulevard, Suite A~~
~~Foster City, CA 94404~~
5726 Sonoma Drive, Suite A
Pleasanton, CA 94566-7751

California Citrus Research Board

~~323 West Oak~~
P.O. Box 230
Visalia, CA 93279
e-mail: citrus@aol.com

California Cling Peach Advisory Board

1220 N Street, Suite A-247
Sacramento, CA 95814

California Department of Food and Agriculture

Agricultural Statistics Branch
P.O. Box 1258
1220 N Street
Sacramento, CA 958124
www.cdfa.ca.gov

California Cling Peach Growers Advisory Marketing—Board

531-D North Alta Avenue

Dried Fruit Association of California

California Dried Fruit Export Association
303 Brokaw Road

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 e-mail: monfortms@psnw.com

~~Santa Clara, CA 95050~~
 710 Striker Avenue
 Sacramento, CA 95834
www.dfaofca.com

California Cooperative Creamery
 P. O. Box 871
 Petaluma, CA 94953-0871

California Dry Bean Advisory Board
 531-D North Alta Avenue
 Dinuba, CA 93618
 e-mail: monfortms@psnw.com

California Corn Growers
 P. O. Box 726
 Chowchilla, CA 93610

California Egg Commission
 1150 North Mountain Avenue, Suite 114
 Upland, CA 91786
 2131 South Grove Avenue
 Ontario, CA 91761
www.eggcom.com

California Creamery Operators Association
 1730 Portola Street
 San Luis Obispo, CA 93405

California Farm Bureau Federation
 1601 Exposition Boulevard, FB1
 2300 River Plaza Drive
 Sacramento, Ca 9581533
www.cfbf.com

California Crop Improvement Association
 Parsons Seed Certification Center
 One Shields Avenue
 University of California, Davis
 Davis, CA 95616-8541
www.ccla.ucdavis.edu

California Fertilizer Association
 1700-1801 I Street, Suite 130-200
 Sacramento, CA 95814
www.calfertilizer.org

California Cut Flower Commission
 11344 Coloma Road, Suite 450
 Gold River, CA 95670
 73 Hangar Way
 Watsonville, CA 95076
www.ccfc.org

California Fig Advisory Board
California Fig Institute
 3425 North First, Suite 109
 Fresno, CA 93726
www.californiafigs.com

California Dairy Herd Improvement Association
 4942 East Yale, Suite 103
 Fresno, CA 93727
 150 Clovis Avenue, Suite 102
 Clovis, CA 93612
www.cdhia.org

California Fig Institute
 P. O. Box 709
 Fresno, CA 93712

California Dairy Research Foundation

502 Mace Boulevard, Suite 2B12

Davis, CA 95616

www.cdrf.org**California Forest Products Commission**~~2150 River Plaza Drive, Suite 270~~~~Sacramento, CA 95833~~853 Lincoln Way, Suite 208Auburn, CA 95603www.calforests.org**California Forestry Association**

300 Capital Mall, Suite 350

Sacramento, CA 95814

California Freestone Peach Association

1704 Herndon Road

Ceres, CA 95307

www.calpeach.com**California Fresh Carrot Advisory Board**

531-D North Alta Avenue

Dinuba, CA 93618

www.carrots.org**California Fresh Fruit Growers, Inc.**

5108 East Clinton Way, Suite 115

Fresno, CA 93727

California Grain & Feed Association

1521 I Street

Sacramento, CA 95814

www.cgfa.org**California Grape & Tree Fruit League**

1540 East Shaw Avenue, Suite 120

Fresno, CA 93710-8000

www.cgftl.com**California Fluid Milk Processor Advisory Board**

1801A Fourth Street

Berkeley, CA 94710

California League of Food Processors~~660 J Street, Suite 290~~980 9th Street, Suite 230

Sacramento, CA 95814

www.clfp.com**California Macadamia Society**

P. O. Box 1298

Fallbrook, CA 92088-1298

California Manufacturing Milk Advisory Board~~1213 13th Street~~3800 Cornucopia Way, Suite D

Modesto, CA 953528

California Melon Research Advisory Board

531-D North Alta Avenue

Dinuba, CA 93618

E-mail: monfortms@psnw.com**California Milk Producers**

11709 East Artesia Boulevard

Artesia, CA 90701

California Milk Producers Advisory Board

400 Oyster Point Boulevard, Suite 214

South San Francisco, CA 94080

www.realcaliforniacheese.com**California Olive Association**c/o California League of Food Processors~~660 J Street, Suite 290~~980 9th Street, Suite 230

Sacramento, CA 95814

www.clfp.com

California Grape Rootstock Improvement Commission

1521 I Street
Sacramento, CA 95814

California Institute of Rural Studies

P. O. Box 2143
Davis, CA 95617
e-mail: cirsmail@cirsync.org

California Kiwifruit Commission

~~1550 Harbor Boulevard, Suite 206
West Sacramento, CA 95691~~
9845 Horn Road, Suite 160
Sacramento, CA 95827
www.kiwifruit.org

California Pepper Commission

531-D North Alta Avenue
Dinuba, CA 93618
e-mail: monfortms@aol.com

California Pistachio Commission

1318 East Shaw Avenue, Suite 420
Fresno, CA 93710
www.pistachios.org

California Planting Cotton Seed Distributors

~~2816 K Street
Bakersfield, CA 93301~~
561 North American Street
Shafter, CA 93263
e-mail: cpcsd@cpcsd.com

California Plum Marketing Board Program

975 I Street
P.O. Box 968
Reedley, CA 93654-0968

California Potato Research Advisory Board

531-D North Alta Avenue
Dinuba, CA 93618
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California Olive Committee

1903 North Fine, #102
Fresno, CA 93727
www.calolive.org

California Pear Advisory Board

1521 I Street
Sacramento, CA 95814
www.calpear.com

California Pear Growers

~~1600 Sacramento Inn Way, Suite 229
Sacramento, CA 95815~~
1220 Melody Lane, Suite 160
Roseville, CA 95678-5181
www.calpear.com

California Strawberry Commission

P. O. Box 269
Watsonville, CA 95077-0269
www.calstrawberry.com

California Sweet Potato Growers Association

P. O. Box 534
Livingston, CA 95334

California Table Grape Commission

~~P. O. Box 27320~~
392 West Fallbrook, Suite 101
Fresno, CA 93729-732011-6150
www.tablegrape.com

California Tomato Board Commission

1625 East Shaw, Suite ~~1221~~106
Fresno, CA 93710
www.tomato.org

California Tree Fruit Agreement

P.O. Box 968
975 I Street
Reedley, CA 93854654-0968
www.caltreefruit.com

California Prune Board

~~5990 Stoneridge Drive 101
Pleasanton, CA 94588-0157~~

California Dried Plum Board

3841 North Freeway Blvd. Suite 120
Sacramento, CA 95834
www.prunes.org

California Rice Handlers' Advisory Board

335 Teegarden Street
Yuba City, CA 95992

California Walnut Commission

1540 River Park Drive, Suite ~~104203~~
Sacramento, CA 95815
www.walnut.org

California Wheat Commission

~~1240 B Commerce~~
P.O. Box 2267
Woodland, CA 95776
e-mail: cawheat1@aol.com

California Rice Industry Association

701 University Avenue, Suite 205
Sacramento, CA 95825-670857
www.calrice.org

California Wild Rice Board

335 Teegarden Street
Yuba City, CA 959921

California Salmon Council

P. O. Box 2255
Folsom, CA 95763-2255
www.calkingsalmon.org

California-Arizona Citrus League

25060 Avenue Stanford, Suite 200
Valencia, CA 91355-3446

California Seafood Council

933 Fellowship Road
P.O. Box 91540
Santa Barbara, CA 93190
e-mail: info@ca-seafood.org

Central California Almond Growers Association

10910 East McKinley
Sanger, CA 93657

Central Valley Almond Association

P. O. Box 428
McFarland, CA 93250

Pacific Egg and Poultry Association

1521 I Street
Sacramento, CA 95814

Dairy Council of California

1101 National Drive, Suite B
Sacramento, CA 95834-1274
www.dairycouncilofca.org

Pistachio Marketing Agreement

1318 East Shaw Avenue, Suite 420
Fresno, CA 93710

Dairy Institute of California

1127 - 11th Street, Suite 718
Sacramento, CA 95814
www.dairyinstitute.org

Pistachio Producers of California

20282 Road 21
Madera, CA 93637-0739

Dairyman's Cooperative Creamery Association
400 South M Street
Tulare, CA 93274

Farmers' Rice Cooperative
2525 Natomas Park Drive, Suite 300
Sacramento, CA 95833
www.farmersrice.com

Grape Improvement Association
P. O. Box 3070
Modesto, CA 95353

Iceberg Lettuce Advisory Board
512 Pajaro Street
Salinas, CA 93901

Mushroom Council
2200 B Douglas Boulevard, Suite 220
Roseville, CA 95661

National Farmers Organization
415 East Birch Street
Hanford, CA 93230
2853 Geer Road, Suite C
Turlock, CA. 95382
www.info.org

National Meat Association
1970 Broadway, #825
Oakland, CA 94612
www.nmaonline.org

Olive Growers Council
121 East Main Street, Suite 4 Suite 6
Visalia, CA 93291

Sun-Maid Growers of California
13525 South Bethel Avenue
Kingsburg, CA 93631
www.sunmaid.com

Processing Strawberry Advisory Board
P. O. Box 929
Watsonville, CA 95077-0929

Processing Tomato Advisory Board
~~3960 Industrial Boulevard, Suite 100~~
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West Sacramento, CA 95798-0067

Raisin Administrative Committee
3445 North First Street, Suite 101
Fresno, CA 93726
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Red Top Rice Growers
P. O. Box 477
Briggs, CA 95917

Rice Growers Association of California
1550 Harbor Boulevard, Suite 200
West Sacramento, CA 95691

Rice Research Advisory Board
335 Teegarden Street
P.O. Box 507
Yuba City, CA 95992
www.syix.com/rrb

Sequoia Walnut Growers Association
P. O. Box 327
Visalia, CA 93279

Sun-Diamond Growers of California
P. O. Box 9024
Pleasanton, CA 94566

The Agricultural Network
P. O. Box 19897
Sacramento, CA 95819-0897

Dairyman's Cooperative Creamery Association
400 South M Street
Tulare, CA 93274

Farmers' Rice Cooperative
2525 Natomas Park Drive, Suite 300
Sacramento, CA 95833
www.farmersrice.com

Grape Improvement Association
P. O. Box 3070
Modesto, CA 95353

Iceberg Lettuce Advisory Board
512 Pajaro Street
Salinas, CA 93901

Mushroom Council
2200 B Douglas Boulevard, Suite 220
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National Farmers Organization
415 East Birch Street
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2853 Geer Road, Suite C
Turlock, CA. 95382
www.info.org

National Meat Association
1970 Broadway, #825
Oakland, CA 94612
www.nmaonline.org

Olive Growers Council
121 East Main Street, Suite 4 Suite 6
Visalia, CA 93291

Sun-Maid Growers of California
13525 South Bethel Avenue
Kingsburg, CA 93631
www.sunmaid.com

Processing Strawberry Advisory Board
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Watsonville, CA 95077-0929

Processing Tomato Advisory Board
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West Sacramento, CA 95798-0067

Raisin Administrative Committee
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Red Top Rice Growers
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West Sacramento, CA 95691

Rice Research Advisory Board
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P.O. Box 507
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Sequoia Walnut Growers Association
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Visalia, CA 93279

Sun-Diamond Growers of California
P. O. Box 9024
Pleasanton, CA 94566

The Agricultural Network
P. O. Box 19897
Sacramento, CA 95819-0897

Valley Fig Growers

P. O. Box 1987
Fresno, CA 93718
www.valleyfig.com

Western Agricultural Society of North America

2110 X Street
Sacramento, CA 95818

Western Growers Association

17620 Fitch Street
Irvine, CA 92714-6032
www.wga.com

Western United Dairymen

1315 K Street
Modesto, CA 95354-0917
www.westernuniteddairymen.com

Walnut Bargaining Association

1225 H Street
Sacramento, CA 95814
542 5th Street
Lincoln, CA 95648
e-mail: icardi@pacbell.net

Western Crop Protection Association

3835 North Freeway Boulevard, Suite 140
Sacramento, CA 95834
www.wcpa.org

Western Pistachio Association

4924 West Mineral King
Visalia, CA 93291
517 C Street NE
Washington DC 20002

Wine Institute

425 Market Street, Suite 1000
San Francisco, CA 94105
www.wineinstitute.org

APPENDIX 3: SAMPLE QUESTIONNAIRES

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To assist them during the appraisal process, assessors may send a questionnaire to agricultural property owners to obtain information on current rents, expenses, and compatible uses on their property. This may be done on an annual or biannual basis. Following are several samples of questionnaires that assessors may use or may find useful in developing his or her own form:

EXAMPLE A

RURAL PROPERTY INCOME AND PRODUCTION QUESTIONNAIRE
CROP YEAR

Date _____

This questionnaire is for the parcel(s) listed below

Please return this form **WITHIN 20 DAYS** in the enclosed envelope.
 If assistance is required, phone _____

TENANT

If you lease or rent all or any portion of this property (either cash or shares):

Tenant's name _____
 Address _____
 Phone _____

CASH RENT

Do you lease or rent all or any portion of this property for CASH RENT:

Yes Length of lease: From _____ To _____
 Rent per acre \$ _____ Acres _____
 Rent per AUM \$ _____ Carrying capacity _____ AUM _____

No My 2002 estimate of cash rent would be \$ _____ per acre.

SHARE RENT FOR TREES, VINES, ASPARAGUS, AND OTHER CROPS

If leased or rented on a SHARE basis:

Parcel No.	Crops Grown	Acres	Owner's Share %	Owner Gross Share \$ Per Acre

TREE, VINE, ASPARAGUS, AND OTHER CROP PRODUCTION

List the actual gross total production per acre for trees, vines, asparagus, and other crops for most recent year by crop and variety and date of planting. Report almond in meat lbs. per acre (do not report by variety). Report tons of peaches as cling or freestone. Report cherries for market by number of 18# (net wt.) lugs/acre and brine type by tons. Report walnuts by ton per variety. Report asparagus by lbs. Report apples by ton, by variety.

Parcel No.	Crop	Variety	Vines On Trellis		Year Planted	Acres	2002	
			Yes	No			Production Per Acre	Price Per LB/Ton/Lug

PRODUCTION COMMENT

If production is more or less than what would be considered "typical" for the area, please explain:

OWNER/LANDLORD EXPENSES

(List any costs to the landlord)				District	
Irrigation Water	No	Yes	\$	Per Acre Per Year	
Reclamation Dist. Expense	No	Yes	\$	Per Acre Per Year	
Pump/Pipeline Expense	No	Yes	\$	Per Acre Per Year	
Fence/Structure Expense	No	Yes	\$		
Property Taxes	No	Yes			
Any other Landlord Expense (Describe)					

BUILDING AND STRUCTURES RENTAL INCOME

If farm rent includes any Building or Structures:					
Residence(s)	No	Yes	\$	Annual Rent Allocated	
Dairy	No	Yes	\$	Annual Rent Allocated	
Other	No	Yes	\$	Annual Rent Allocated	

NON-FARM INCOME ACRES S/ACRE/YEAR

- Hunting Rights _____
- Gas Exploration Lease _____
- Sand and Gravel _____
- Conservation Reserve Program _____
- _____

IRRIGATION (PRESENT USE)

<input type="checkbox"/> Dirt Ditch _____	<input type="checkbox"/> Concrete Ditch _____
<input type="checkbox"/> Concrete Pipeline _____	<input type="checkbox"/> Permanent Sprinklers _____
<input type="checkbox"/> Pull Hose _____	<input type="checkbox"/> PVC Pipeline _____
<input type="checkbox"/> Drip/Micro Sprinklers _____	<input type="checkbox"/> Other (Explain) _____

CHANGES

- (A) If structures or additions have been added or removed in the last year indicate:
- | Parcel # | Item Description | Add/Remove | Date Complete | Dimensions | Cost |
|----------|------------------|------------|---------------|------------|------|
| _____ | | | | | |
- (B) If miscellaneous improvements (i.e., sprinklers, trellis, pump, well, etc.) have been added/removed in the last year:
- | Parcel # | Item Description | # Acres | Add/Remove | Date Complete | Pump size/Well Depth | Cost |
|----------|------------------|---------|------------|---------------|----------------------|------|
| _____ | | | | | | |
- (C) If trees, vines or asparagus were removed in the last year indicate:
- | Parcel # | Variety | Date Planted | # Acres | Date Removed |
|----------|---------|--------------|---------|--------------|
| _____ | | | | |
- If trees or vines were grafted or budded in the last year indicate:
- | Parcel # | # Acres | Old Variety | Date Planted | Date Grafted | New Variety |
|----------|---------|-------------|--------------|--------------|-------------|
| _____ | | | | | |
- If trees, vines, or asparagus were planted in the last year indicate:
- | Parcel # | Type/Variety | # Acres | Date Planted | Spacing | Trellis(Yes/No) | Irrigation Type |
|----------|--------------|---------|--------------|---------|-----------------|-----------------|
| _____ | | | | | | |
- (D) Explain any changes in land use (i.e., dry land now irrigated, land leveled, deep ripped, etc.).
- _____

YOUR COMMENTS

Please include any additional information you feel may help us make a fair assessment of your property:

THANK YOU FOR YOUR COOPERATION

I certify under penalty of perjury under the laws of the State of California that the foregoing and all information hereon, including any accompanying statements or documents, is true, correct, and complete to the best of my knowledge and belief.

Signature of Owner, Partner, Officer or Authorized Agent Date Telephone Number

Name and telephone number of whom you prefer we contact if clarification or more detail is needed:

Same as above or: _____
Name Telephone Number

EXAMPLE B

AGRICULTURAL GRAZING & LEASE QUESTIONNAIRE

ASSESSORS PARCEL NO.

OFFICIAL REQUEST

This request is made in accordance with Section 441, Revenue and Taxation Code. This statement must be completed according to the instructions and filed with the Assessor on or before

Failure to file this statement will authorize the Assessor to estimate the value of your property based on information in his possession pursuant to Section 501, Revenue and Taxation Code.

This statement is not a public document. The information contained herein will be held secret by the Assessor (Section 451, Revenue and Taxation Code); it can be disclosed only to the district attorney, grand jury, and other agencies specified in Section 408 of the Revenue and Taxation Code. Attached Schedules are considered to be part of the statement.

IMPORTANT

If there have been any changes or additions to the land, buildings, other improvements, or tree and vine plantings BETWEEN JAN. 1 2001 AND DEC. 31, 2001, please complete the reverse side of this form.

Dear Property Owner:

In order to evaluate grazing properties in the Williamson Act Agricultural Preserve, the County Assessor is required to estimate the livestock carrying capacity of each parcel. It is necessary from time to time to ask the property owner to provide information to help in this process. Please provide the information requested below. Attachments are considered part of this form.

Please answer all questions fully.

1. Indicate the type of grazing operation:

Cow - Calf Stocker - Feeder Dairy Cattle Sheep Other

The actual length of this grazing season: Calendar month _____ through calendar month _____

The actual number of head grazed this season: _____

The average historical length of the grazing season: _____ The average historical number of head grazed: _____

2. Is this property leased or rented to others? Yes No If no, what would you consider as fair annual cash rent per acre? _____

If yes, please enter:

a) The name of the tenant _____ The number of acres _____

b) The date the most current rent was negotiated _____ The length of term _____

c) Total GROSS annual rent _____ For the year ending _____

d) The type of lease: Cash rent per acre Cash rent per head Cash rent based on weight gain Other _____

e) Does the rent include structural improvements? Yes No If yes, please describe: _____

Buildings Fencing Pumps Other _____

f) The property owner pays the following expenses: Property Taxes Irrigation District Taxes _____

Maintenance of structural improvements Other _____

3. Is there any additional income, such as hunting or recreational rights, radio or cell phone towers, etc? Yes No

If yes, please indicate the number of acres, annual gross income and itemize expenses (use reverse).

4. Is all or any portion of this property "Certified Organic?" Yes No

5. Are you renting grazing land in this county owned by others? Yes No

If yes, please identify the property APN or legal description, owner, number of acres, and amount of rent in the space below:

6. Please provide any additional information which you feel may help the Assessor to make a fair evaluation of you property (use below).

7. Signed _____ Local phone number _____ Date _____

EXAMPLE C

AGRICULTURAL CROP & LEASE QUESTIONNAIRE

ASSESSORS PARCEL NO.

OFFICIAL REQUEST

This request is made in accordance with Section 441, Revenue and Taxation Code. This statement must be completed according to the instructions and filed with the Assessor on or before

This statement is not a public document. The information contained herein will be held secret by the Assessor (Section 451, Revenue and Taxation Code); it can be disclosed only to the district attorney, grand jury, and other agencies specified in Section 408 of the Revenue and Taxation Code. Attached Schedules are considered to be part of the statement.

Failure to file this statement will authorize the Assessor to estimate the value of your property based on information in his possession pursuant to Section 501, Revenue and Taxation Code.

IMPORTANT

If there have been any changes or additions to the land, buildings, other improvements, or tree and vine plantings BETWEEN JAN. 1 2001 AND DEC. 31, 2001, please complete the reverse side of this form.

Please answer all questions fully.

1. List all planting areas and their ACTUAL total production for the past crop year only.

Crop	Variety	Date Planted	Acres	Total Production (Indicate lbs., tons, bins, etc.)

If the property is used for grazing purposes, please indicate the type of operation:

Cow-Calf Stocker-Feeder Dairy Cattle Sheep Other

2. Is this property leased or rented to others? Yes No

If yes, please enter:

a) The name of the tenant _____ The number of acres _____

b) The date the most current rent was negotiated _____ The length of term _____

c) Is the rent based upon Crop-Share? Yes No If yes, _____ % to owner _____ % to tenant
or Cash Per Acre? Yes No If yes, the total gross rent \$ _____ for the year ending _____

d) Does the rent include structural improvements? Yes No If yes, please describe:
 Pump Pipeline House Shed Other

e) The property owner pays the following expenses:
 Property Taxes Irrigation District Taxes Drainage District Taxes Pump/Pipeline Maintenance
Other _____

3. Is there any additional income, such as hunting or recreational rights, radio or cell phone towers, etc? Yes No

If yes, please indicate the number of acres, annual gross income and itemize expenses (use reverse).

4. Is all or any portion of this property "Certified Organic?" Yes No

5. If owner operated, GROSS INCOME \$ _____ for the year ending _____

6. Are you renting land in this county owned by others? Yes No

If yes, please identify the property APN or legal description, owner, number of acres, and amount of rent in the space below:

7. Signed _____ Local phone number _____ Date _____

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Please indicate on the plot plan below the dimensions and location of the parcel of any changes to the following:

			ACTUAL	COMPLETED
			COST	(MONTH/YEAR)
LAND:	Leveling	acres	\$	/
	Ripping	acres	\$	/
	Drainage Work	acres	\$	/

BUILDINGS OR OTHER Indicate structures, pumps, wells, pipelines, wind machines, stakes, wire, drip irrigation, etc. added or removed

STRUCTURES:	Description:		\$	/
			\$	/
			\$	/
			\$	/
			\$	/

TREES AND VINES: Indicate acres, spacings, species of trees or vines added or removed

	Description:		\$	/
			\$	/
			\$	/
			\$	/
			\$	/
			\$	/

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GLOSSARY OF TERMS

TERM	DEFINITION
<i>Agricultural Use</i>	Use of land for the purpose of producing an agricultural commodity for commercial purposes.
<i>Animal Unit Month</i>	The quantity of feed that a mature 1,000 pound cow or five mature sheep need for one month to sustain life and maintain good health.
<i>Annual Crop</i>	Plants having a life cycle of one year that produce crops for only one year or season.
<i>Appraisal Unit</i>	The unit that people in the market typically buy and sell.
<i>Arable Land</i>	Land that is suitable for plowing and for producing crops.
<i>Base Year Value</i>	In accordance with section 110.1 of the Revenue and Taxation Code, a property's base year value is its fair market value as of either the 1975 lien date or the date the property was last purchased, newly constructed, or underwent a change in ownership after the 1975 lien date.
<i>California Land Conservation Act</i>	Enacted by the California Legislature in 1965 in an effort to preserve agricultural lands for the production of food and fiber and to discourage noncontiguous urban development; aka Williamson Act.
<i>Capitalization</i>	Any method of converting expected future benefits into an indicator of present value; the discounting of projected income to a present value.
<i>Capitalization Rate</i>	Any rate used to convert income into an indicator of value; a ratio that expresses a relationship between income and value.
<i>Cash Rent</i>	The amount of rent paid in money; a fixed, negotiated money rent for a farm, usually in dollars per acre per year.
<i>Comparative Sales Approach</i>	An approach to value by reference to sales prices of the subject property or comparable properties; under Property Tax Rule 4 , the preferred approach when reliable market data are <u>is</u> available.
<i>Compatible Use</i>	In accordance with Government Code sections 51238.1, 51238.2, and 51238.3, any use determined by the county or city administering this act to be compatible with the agricultural, recreational, or open-space use of land within the preserve and subject to contract. Compatible use includes agricultural use, recreational use, or open-space use unless the board or council finds that such use is not compatible with the agricultural, recreational, or open-space use to which the land is restricted by contract.

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<i>Contract Rent</i>	The actual amount of rent a property is earning as specified in a lease; the existing rent on property as distinguished from rent that could be expected if the property were available for rent on the open market.
<i>Cost Approach</i>	A value approach using the following procedures to derive a value indication <u>indicator</u> : (1) estimate the current cost to reproduce or replace an existing structure without untimely delays; (2) deduct for all accrued depreciation; and (3) add the estimated land value and an amount to compensate for entrepreneurial profit (if present).
<i>Crop</i>	All products of the soil grown, harvested, and held primarily for sale, including seeds held for sale or seeds to be used in the production of a crop; includes fruit grown on trees and grass used for pasturage.
<i>Direct Capitalization</i>	The <u>A</u> capitalization method used to convert a single year's income expectancy into an indication <u>indicator</u> of value, either by dividing the income estimate by an appropriate rate or by multiplying the income estimate by an appropriate factor.
<i>Endangered Species</i>	Any species, as defined in the California Endangered Species Act, that has been classified and protected as an endangered, threatened, rare, or candidate species by any entity of the state or federal government.
<i>Enforceable Restriction</i>	Open-space land is enforceably restricted if it is subject to (a) a contract, (b) an agreement, (c) a scenic restriction entered into prior to January 1, 1975, (d) an open-space easement, or (e) a wildlife habitat contract.
<i>Farmland</i>	Land devoted to agricultural production; usually refers to the land comprising a farm, including tillable areas, untillable areas, and woodlots.
<u>Farmland Security Zone</u>	<u>Land contracted for a rolling 20-year term under the California Land Conservation Act; aka "Super Williamson Act."</u>
<i>Highest and Best Use</i>	The most profitable use of a property at the time of the appraisal; that available use and program of future utilization that produces the highest present land value; must be legal, physically possible, financially feasible, and maximally profitable.
<i>Income Approach</i>	Any method of converting an income stream or a series of future income payments into an indicator of present value.
<i>Lien Date</i>	The lien date, for property tax purposes, is 12:01 a.m. on January 1 for a <u>All taxable property (both state and locally assessed) is assessed annually for property tax purposes as of 12:01 a.m. on January 1, which</u> It is called the lien date. It is referred to as the lien date because on this date

	the taxes become a lien against all real property assessed on the secured roll.
<i>Level Annuity</i>	An income stream in which the amount of each payment is the same; a level, unchanging flow of income over time.
<i>Market Rent</i>	The amount of rental income that could be expected from a property if available for rent on the open market, indicated by the prevailing rental rates for comparable properties under similar terms and conditions; distinguished from contract rent, which is the actual rental for the <u>subject</u> property as specified in a lease; also referred to as economic rent.
<i>Open-Space Land</i>	Land designated for nonbuilding uses; typically of three ownership types: private open space adjacent to dwellings owned by individual residents, public open space owned by government, and common open space owned by a community association and set aside for the use of residents.
<i>Open-Space Use</i>	The use or maintenance of land in such a manner as to preserve its natural characteristics, beauty, or openness for the benefit and enjoyment of the public, to provide essential habitat for wildlife, or for the solar evaporation of sea water in the course of salt production for commercial purposes.
<i>Owner-Operator Income</i>	Gross income earned by a farm or ranch operated by the owner.
<i>Perennials</i>	Plants, vines, and trees having a life cycle of more than two years that produce crops from the same root structure year after year.
<i>Production</i>	Process or act of producing. Fruit of labor, as the production of the earth, comprehending all vegetables and fruits.
<i>Property</i>	Property includes all matters and things--real, personal, and mixed--that are capable of private ownership.
<i>Prime Agricultural Land</i>	All land (1) which qualifies for rating as class I or class II in the Soil Conservation Service land use capability classifications; (2) which qualifies for rating 80 through 100 in the Storie Index Rating; (3) which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one AUM per acre; (4) which is planted with fruit- or nut-bearing trees, vines, bushes or crops which have a nonbearing period of less than five years <u>and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than \$200 per acre</u> ; and (5) which has returned from the production of

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- unprocessed agricultural plant products an annual gross value of not less than \$200 per acre for three of the previous five years.
- Prudent Management*** Practically wise, judicious, careful, discreet, circumspect, and sensible in the act of managing, by direction or administration, an enterprise.
- Real Property*** The possession of, claim to, ownership of, or right to the possession of land; all mines, minerals, and quarries in the land; all standing timber whether or not belonging to the owner of the land, and all rights and privileges appertaining thereto; and improvements;—In California property tax law, the term is synonymous with "real estate."
- Recapture*** The return of invested capital; in real estate investments, capital may be returned gradually as part of the annual income, it may be recaptured all or in part through resale of the property, or through a combination of both. The variety of the methods of recapture requires the various capitalization techniques.
- Recreational Use*** The use of land by the public for walking, hiking, picnicking, camping, swimming, boating, fishing, hunting, or other outdoor games or sports for which facilities are provided for public participation. Any fee charged for the recreational use of land shall be in a reasonable amount and shall not have the effect of unduly limiting its use by the public.
- Remaining Economic Life*** The estimated period during which the improvements will continue to contribute to a property's value.
- Residual Techniques*** ~~Procedure used to capitalize the income allocated to an investment component of unknown value after all investment components of known values have been satisfied; may be applied to a property's physical components (land and building), financial interests (mortgage and equity), or legal estates (leased fee and leasehold).~~
- Capitalization techniques (within the income approach) in which an income amount is allocated to a property component of unknown value after subtracting the income return required by the property component of known value. This income amount is then capitalized into an estimate of value of the unknown component.
- Risk Component*** A component added to the capitalization rate pursuant to Revenue and Taxation Code section 423(b) which shall be a percentage determined on the basis of the location and characteristics of the land, the crops to be grown thereon, and the provisions of any lease or rental agreement to which the land is subject.

<i>Risk Rate</i>	The annual rate of return on capital that is commensurate with the risk or uncertainty assumed by the investor; the rate of return or yield required to attract capital to the level of risk or uncertainty of that investment.
<i>Share Rent</i>	A prenegotiated agreement whereby the owner of farmland receives a share of the crops produced in lieu of cash rent.
<i>Value</i>	The power of one commodity to command other commodities in exchange; a ratio of exchange; present worth of future net benefits.
<i>Weighted Average</i>	An average <u>that is calculated by weighting in which each component is adjusted by a factor that reflectsrepresents its relative importance to the whole; obtained by multiplying each component by its assigned weight, and adding the products; used in the band of investments method. and dividing the sum of the products by the sum of the weights.</u>
<i>Wildlife Habitat</i>	A land or water area designated by a board or council, after consulting with and considering the recommendation of the Department of Fish and Game, as an area of great importance for the protection or enhancement of the wildlife resources of the state.
<i>Williamson Act</i>	<u>Land contracted for a rolling 10-year term under the See-California Land Conservation Act.</u>
<i>Yield</i>	The return on investment.
<i>Yield Capitalization</i>	A capitalization method used to convert future benefits to present value by discounting each future benefit at an appropriate yield rate or by developing an overall rate that reflects the investment's income pattern, value change, and yield rate.
<i>Yield Rate</i>	A measure of investment return (usually annualized) that is applied to a series of incomes to obtain the present value of each; examples are the interest rate, the discount rate, the internal rate of return, and the equity yield rate.

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