

GOAL 3 - AGRICULTURAL LANDS

A. Introduction:

Hood River County's principal industries are agriculture, food processing, lumbering, and recreation. Agriculture is most important for the County's agriculture-related sectors of the Hood River County economy, but in many other sectors as well

The Hood River Valley is one of the best known names in Pacific Northwest agriculture. Many farming districts in the region are larger and have greater volume and value of produce. Except for the Columbia Basin wheat districts, however, none is so specialized. About 90 percent of the farm income is derived from the sale of horticultural products. Over three-quarters century of national and international marketing of fruits has gained the valley a wide reputation as a quality fruit producer.

In the fall of each year, over 2,000 people are employed harvesting fruit off orchards in the Hood River Valley. After the harvest, fruit packing, canning, and shipping employ in excess of 1,700 people each year. Due to the advent of controlled atmosphere storage and related innovations, the fruit packing and processing season has now been extended to as long as nine months out of the year. Even in the late spring and summer, when agriculture-related employment is at its cyclical low point, over 300 people are employed at fruit packing, shipping and processing industries in Hood River County (sources for figures: State of Oregon Employment Division, Hood River office; phone calls to County fruit packers and processors, 1980). The Central Valley is the major agriculture area of the County. The main crops grown in the Central Valley are orchard crops - primarily apples and pears.

B. Soils; General:

The land capability classification system of the U.S. Department of Agriculture classifies soils on the basis of soil depth, permeability, fertility, slope steepness, amount of rainfall, length of growing season, and other factors. Those soils that have the most ideal combination of the above factors are Class I soils, while those soils with the combination of factors that would make the growing of crops the most extremely difficult are Class VIII soils. LCDC Goal 3 (Agricultural Lands) requires that Class I to IV soils and other soils which are suitable for farm use be preserved and maintained for farm use, unless (1) the land is not available for farm use (i.e., is physically developed or irrevocably committed to development); or (2) an exception to the Goal can be justified. Justification for an exception to the Agricultural Goal for particular properties or situations must be based on the following criteria: (1) Why the use conflicting with the agriculture use should be provided for, (2) what alternative locations within the area could be used for the proposed use, (3) what are the long term environmental, social, and energy consequences from not applying the Goal or permitting the alternative use, and (4) a finding that the proposed uses will be compatible with other adjacent uses.

C. Definition: Land Capability Classification:

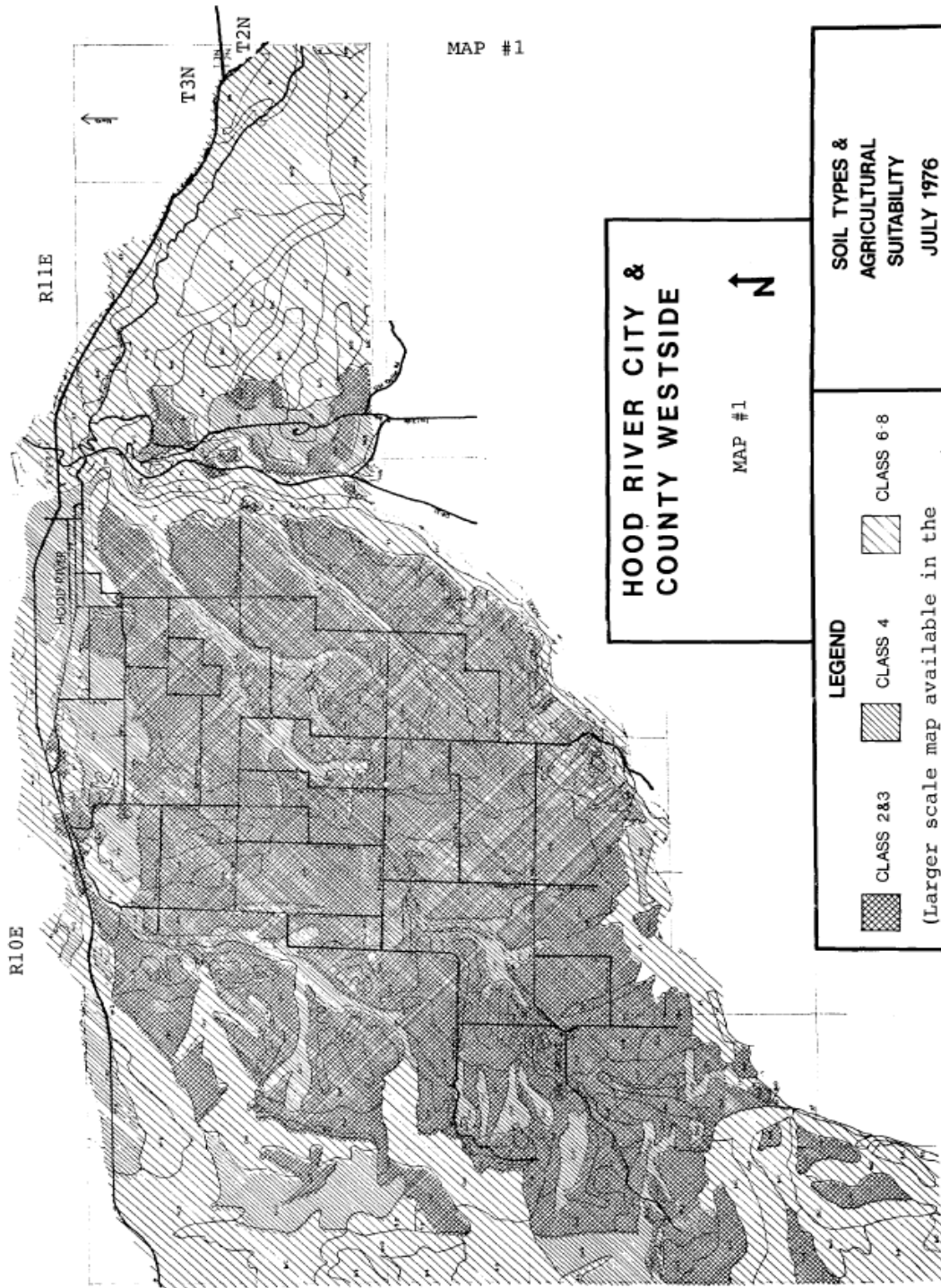
The land capability classification is a grouping used primarily for farming purposes and shows for each soil the potential and limitations for sustained production of the common cultivated crops that do not require specialized site conditioning or site treatment. All soils in Hood River County, have been placed in one of the eight capability classes of land. The risks of soil damage or limitations in use become progressively greater from Class I to Class VIII. Each capability class is divided into subclasses that show the major cause of limitations: e for erosion hazard, w for wetness, s for root zone limitations and c for climatic limitations. Class I soils have few limitations that restrict their use and are excellent for cultivated crops. Class II soils have some limitations that reduce the choice of plants or require moderate conservation practices and are good for cultivated crops. Class III soils have severe limitations that reduce the choice of plants or require special conservation practices, or both. They are fair for cultivated crops. Class IV soils have very severe limitations that restrict the choice of plants or require very careful management, or both. They are poor for cultivated crops. Class VI soils have severe limitations that make them generally unsuited for cultivation and limit their use largely to pasture, woodland, and wildlife food and cover. Physical conditions are such that pasture improvements can be made if needed. Class VII soils have very severe limitations to woodland, grazing, or wildlife. Physical conditions are such that it is impractical to apply improvements. Soils and land forms in Class VIII have limitations that prohibit their use for commercial plant production and restrict their use to recreation, wildlife, water supply, and aesthetic purposes. No Class V land occurs in Hood River County¹ (see Map 1, 2, 3, and 4, and Table 1.)

D. Western County:

Agricultural land is defined by the Land Conservation and Development Commission as that land falling predominantly within Classes I, II, III, and IV in Western Oregon and land predominantly of Classes I, II, III, IV, V, and VI in Eastern Oregon. Hood River County has been identified as a Western County by the Land Conservation and Development Commission.

The county geography is more conducive to intensive farming (i.e., orchards) than it is to Eastern Oregon type extensive farming and the rainfall more closely resembles western rainfall levels.

¹ General Soil Map with Soil Interpretations for Land Use Planning, Hood River County, Oregon, Soil Conservation Service – USDA, March, 1972; and Soil Survey of Hood River County Area, Oregon (SCS), 1981.



E. Soil Data By Area:

1. City/Westside: As can be seen in the Agricultural Soils Map 1, the majority of the land within the area must be considered as agricultural. The best soils for orcharding, however, are generally considered to be the Hood loams, Oak Grove loams, Wind River loams, and Van Horn loams.(Also see Table 1.)

Obviously, not all Class I through VI soils are presently in intensive farm use. There are reasons for this. Generally, the land with the best suitability for orcharding is presently in orchards. Other Class III, IV, and VI land is presently vacant. It may be noted that the area immediately west of the Hood River City proper, though largely Class III and IV land, is little used for orcharding. This is due to a number of reasons, the most important of which are probably stoniness and wind. The general rule seems to be that the farther north, and thus the closer to the Gorge, the more wind. Wind damage to fruit is something, depending on the degree of damage, that cannot be absorbed economically. Also, the soils in this area which are primarily of the Rockford series, are unusually stony. It is hard to explain the high agricultural capability classes assigned to them by Soil Conservation Service.

Soils to the south and southwest of the city proper are, on the other hand, highly productive. It may be noted that the majority of this land is presently in fruit production though the agricultural capability rating is generally the same as in the Rockford soils area. This is due primarily to the fact that these soils (largely of the Wind River and Van Horn series) do not possess the restrictions of stoniness and extreme wind as is the case in the Rockford area.

To the east of the Hood River, orchards are found primarily in Oak Grove soils. Much of the area is in forest and open space and is unsuitable for orcharding. One reason for this unsuitability is the excessive slopes which are found in the area. The slopes make machine use difficult and soil erosion probable.

2. Central Valley: Most of the settled portion of the Central Valley area has Class I to IV soils. Middle Mountain and the steeper lands on the east and west sides of the area have primarily Class VI to VIII soils

There are no Class V soils in Hood River County. The best soils in the Central Valley for orcharding are: (1) Hood Soil (in the Dethman Ridge and the Pine Grove area west of Eastside Road), (2) Oak Grove soil (east and upslope from Eastside Road; east portion of Willow Flat area), (3) Parkdale soil (north side of Middle Mountain), and (4) Wy'East soil (in the area around Odell). The aforementioned soils are all Class I to IV soils. There are a few soils that are good agricultural soils but that are not Class I to IV soils: Culbertson soil on slopes in excess of 20 percent, and Bald Cobbly Loam are both Class VI soils that currently support orchards. (See Map #2.)

TABLE 1

HOOD RIVER COUNTY SOIL CHARACTERISTICS AND RESOURCE MATRIX

	LEGEND		
	HIGH	MEDIUM	LOW
SOILS			
HAZARD FOR LIGHT CONSTRUCTION FLOODING			
LIMITATIONS FOR LIGHT CONSTRUCTION			
RESOURCES			
URBAN SUITABILITY			
RURAL SUITABILITY			

20% SLOPE	0-8%	0-8%
SEVERE	MODERATE	SLIGHT
SEVERE	MODERATE	SLIGHT
< 4"	---	> 6"
SEVERE	MODERATE	SLIGHT
< 20"	20-40"	> 40"
SLOAN	MODERATE	RAPID

CLASS III-III	CLASS IV	CLASS I-III
POOR	FAIR	GOOD

POOR	FAIR	GOOD
------	------	------

POOR	FAIR	GOOD
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⊕ VARIABLE
0.5-45%
⊕ MODERATE UNDER 4"
⊕ ACCORDING TO SLOPE

HOOD RIVER COUNTY PLANNING DEPARTMENT
NOVEMBER 1974

3. Columbia Gorge: Soils in the area are generally well drained, and in many cases were formed from colluvium weathered from basalt. The soils generally have a relatively high proportion of gravel and rock mixed with loam. Except for a very narrow band of Multnomah silt loam along the Columbia River in the extreme western end of the area, there are no Class I-IV soils. Class I-IV soils are the best soils for growing agricultural crops in the Soil Conservation Service Classification system. The climate is characterized by moderate temperatures, heavy precipitation, and high winds. Precipitation ranges from a low of 50 inches per year in the eastern portion to a high of more than 70 inches per year in the Cascade Locks vicinity. (See Map #3.)
4. Mt. Hood Area: Soil in the Mt. Hood area are discussed under the Agricultural Lands Inventory. (See Map #4.)

F. Agricultural Lands Inventory:

1. Map 4 shows only additional agricultural lands identified per the LCDC directives. These are the areas specified in the LCDC critique, page 33, as not being shown previously in the Central Valley and Mt. Hood Plans. A larger detailed map, scale 1"=2000' entitled Agricultural Lands, 1982 is available for review in the Hood River County Planning Department. (Maps 1, 2, and 3 show remaining inventoried areas.)
2. This inventory along with previous inventories submitted to the LCDC for the Columbia Gorge, City/Westside and remaining portions of the Central Valley constitute an inventory of agricultural lands on private lands in Hood River County. Due to time constraints, a consolidated Agricultural Map is not now presented, however this will be a major work task during post-acknowledgement (see Maps 1, 2, 3, and 4).
3. The majority of the additional agricultural lands identified were above the valley bottomlands and on upper terraces and slopes to the east, west and south. The dominant land uses and activities in these areas are forest-related, consequently the majority were planned and zoned for Forest or Environmental Protection. Furthermore, farm uses are permitted in the Forest Zone.
4. Agricultural lands were identified using the SCS soils classes I-IV, as well as the other factors listed in Goal 3. Irrigation district boundaries overlaid on the I-IV soils shows that they generally coincide with few exceptions. Discussions with irrigation districts revealed that some reasons why some lands with agricultural soils are not in irrigation districts include: (a) the lands are too steep for watering purposes; (b) water is not available; and (c) their elevations make temperatures a

MAP #2

HOOD RIVER

CENTRAL VALLEY

MAP #2

PINE GROVE - MOUNT HOOD SECTION

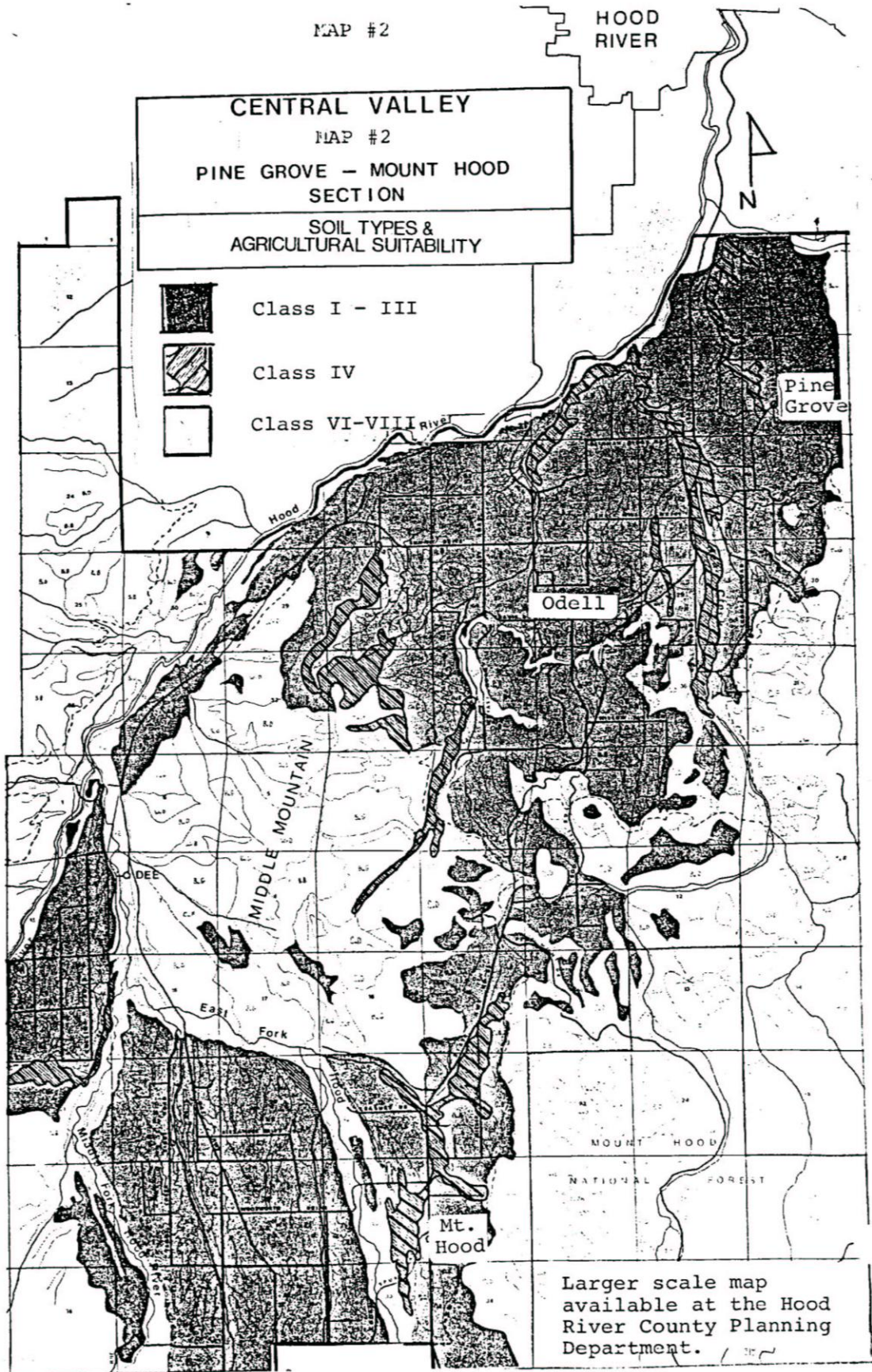
SOIL TYPES & AGRICULTURAL SUITABILITY



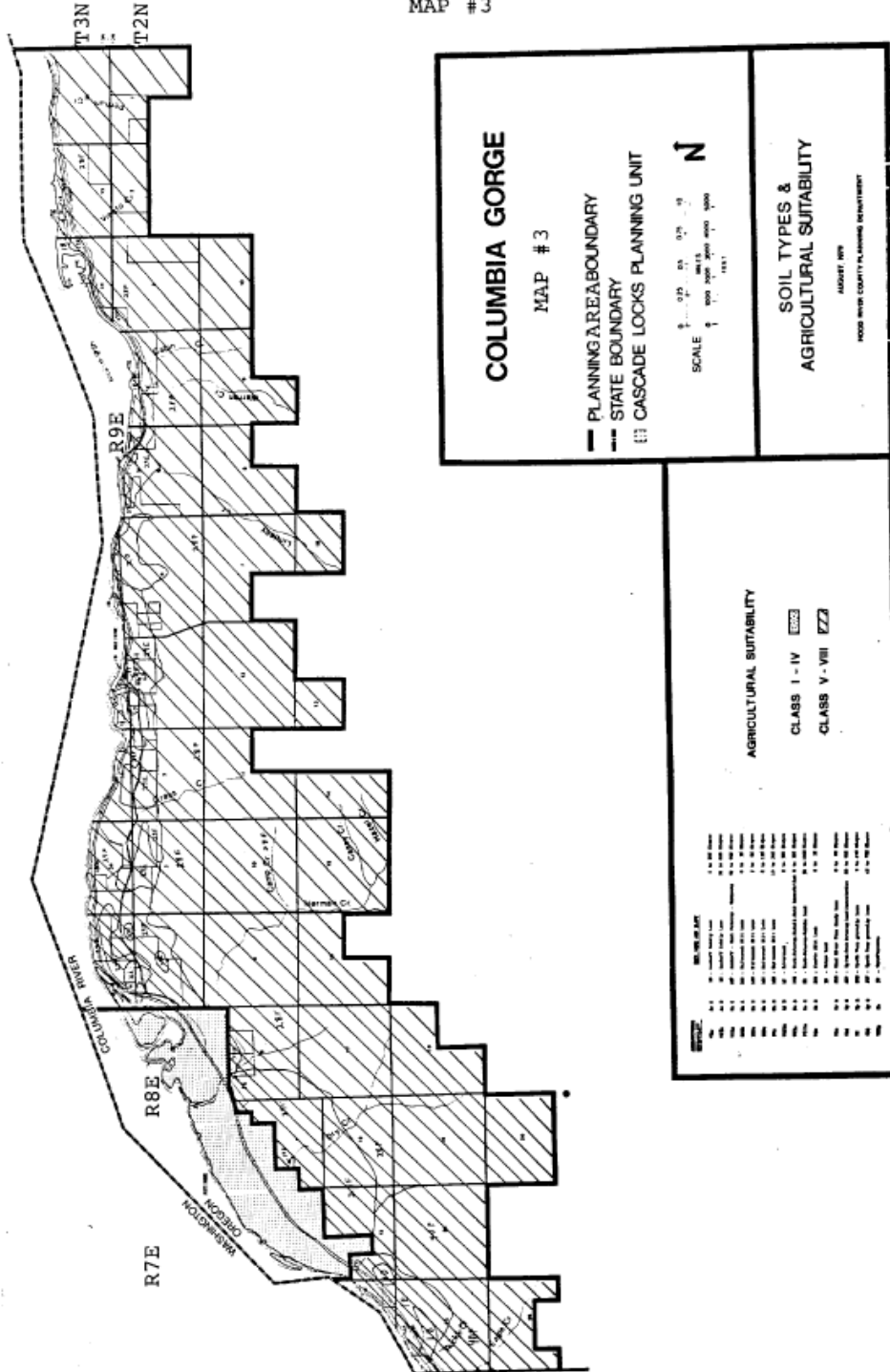
Class I - III

Class IV

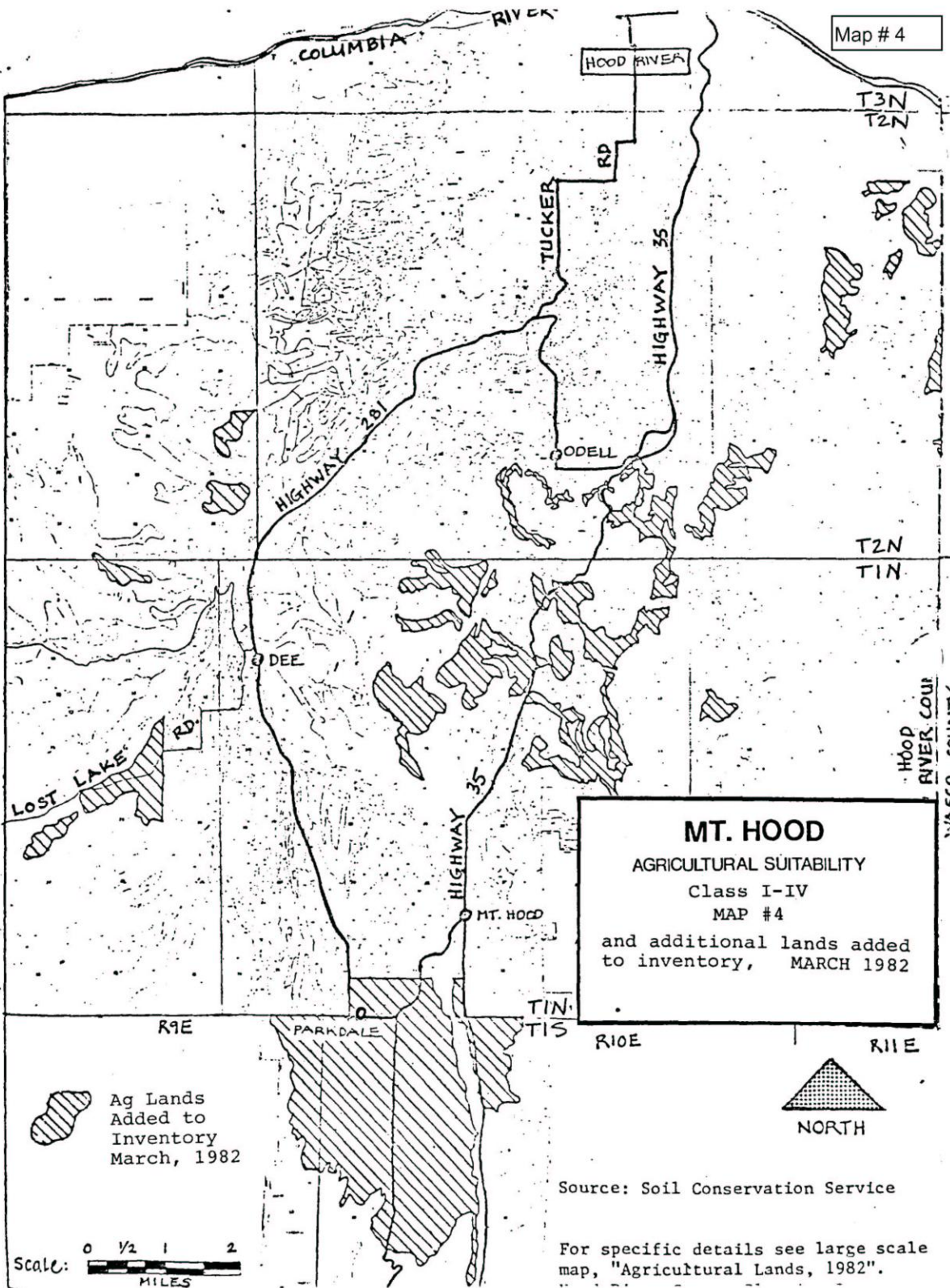
Class VI-VIII



Larger scale map available at the Hood River County Planning Department.



Larger scale map available at the Hood River County Planning Department.



5. The County Extension Office and the Soil Conservation Service have reviewed in general, the larger map and consider Class I-IV soils, as shown, as Agricultural Lands.
6. To assist in further identifying agricultural lands, the following definition, which is consistent with Goal 3, is being added to the County's Policy Document. Agricultural land defined includes; land of predominantly Class I, II, III, and IV soils as identified in the Soil Capability Classification System of the Soil Conservation Service (i.e., Soil Survey of Hood River County prepared by the U.S.D.A., Soil Conservation Service in cooperation with the Oregon Agricultural Experiment Station, January, 1981) and other lands which are suitable for farm use taking into consideration soil fertility, suitability for grazing, climatic conditions, existing and future availability of water for farm irrigation purposes, existing land use patterns, technological and energy inputs required, or accepted farming practices. Lands in other classes which are necessary to permit farm practices to be undertaken on adjacent or nearby lands shall be included in agricultural land in any event.
7. Additional indicators identifying the total agricultural resource base in Hood River County include the following: (a) County Records and Assessments information (1982) states there are approximately 26,594± acres classed as Farm (i.e., total acres for farm classes 501, 502, and 503); (b) Census of Agriculture (1978); total farm acres, 26,788±; which includes total acres for all crops; (c) lands planned and zoned Exclusive Farm Use amount to 29,000± acres (1980); and (d) Soil Conservation Service Information states there are 40,382 acres of Class I-IV soils in the County. Indicators (a), (b), and (c) parallel each other, consequently a fair assumption is made that the agricultural resource base in Hood River County generally varies from 26,000± to 29,000± acres (i.e., 40 to 45± square miles). Consideration must also be given to the following factors: (a) the Goal 3 definition of agricultural lands is more encompassing and could include soil classes beyond IV, consequently it is fair to assume that more lands were zoned Exclusive Farm Use; and (b) although only approximately 72% of the 40,382± acres identified by the Soil Conservation Service as being Class I-IV soils were zoned Exclusive Farm Use, the remaining Class I-IV soils were primarily zoned forest or Environmental Management. Exceptions were taken for other areas and are currently being reviewed to evaluate if they, in fact comply with the exceptions process.
8. Based upon the information in (6) above, the majority of the County's agricultural resource base is planned and zoned Exclusive Farm Use. Overall, approximately 45 square miles or 33% the County's private land base (i.e., 138+ square miles) is zoned Exclusive Farm Use. (There are approximately 529 square miles in the County and 74%± equal to 391 square miles, are in some form of public ownership).

9. The Soil Survey of Hood River County (January, 1981) provides soils information for lands outside the Mt. Hood National Forest. Lands within the National Forest are being conserved for Forest resources and uses. The various U.S.F.S. plans designate these lands for forest uses, and they have been zoned Forest. Any conversion of U.S.F.S. lands or other public lands to private land will require the County to plan and zone these lands commensurate with County Policies, Strategies, etc., in Goal 2.
10. The Mt. Hood National Forest Final Environmental Statement (FES, 1977) identifies certain lands as being suitable for agriculture that are not listed by SCS as being Class I-IV soils. These soils are located south of Parkdale, primarily in Sections 18, 19, 20, 21, 29, 30, and 31; and are primarily classed by the SCS as 13E - Hutson fine sandy loam, class VIe. These soils were an issue of discussion during hearings on a Zone and Comprehensive Plan Change regarding file #81-82. The Planning Commission in their findings of fact, determined that the soils in the above general location were considered agricultural lands, based on additional soils tests and other information given during the hearings. Due to the lengthy text, the findings are not being submitted, but are on file at the Planning Department (file #81-82).

Although these lands were determined to have an agricultural capability they were planned and zoned Forest and Environmental Protection and are shown on the Forest Inventory Map, not the attached agricultural lands map.

11. The FES study took into account soil types as classified by the SCS and SRI (Soil Resource Inventory for Mt. Hood National Forest) as well as slope, climate, etc., according to Mt. Hood National Forest personnel. Furthermore, they stated it is not known how the SRI and SCS classification relate. According to the Department of Land Conservation and Development staff, it is acceptable to identify agricultural lands using whatever information is available, as long as Goal 3 is met. Goal 3 states that other lands which are suitable for agriculture shall be included as farm lands, taking into account such things as soil fertility, climatic condition, etc. According to Mt. Hood National Forest personnel, it was this type of information that was used to classify lands in the FES as suitable for open space uses and are either designated Agriculture, Forest, or Environmental Protection or have exceptions taken for them.

G. Micro Climate:

Microclimatic conditions significantly affect agricultural productivity. Cold air drainage is critical during the mid-spring budding period. Problems occur during this period as night temperatures at times drop below freezing. Blossoms are vulnerable to these temperature variations. This problem may be combated through the use of orchard heaters and wind machines.

The thermal growing season (time period between 32-degree frosts) and the physiological growing season (time period above 40 degrees) affect plant growth also. All other things being equal, orchards on slopes and at lower elevations are generally more productive than orchards in depressions (termed “frost pockets”) and at higher elevations. Generally, the further to the north and west in the county, the longer the growing season.

The largest single area in the Central Valley area with Class I to IV soils but with the lowest agricultural productivity is the northern portion of the Upper Hood River Valley. Middle Mountain blocks cold air draining from the rest of the Upper Valley. This air settles in the northern Upper Hood River Valley and makes the cultivation of productive orchards difficult.

H. Irrigation Water:

The irrigation suitability of soil is based on soil and land characteristics. Soils with good irrigation potential are generally those with good soil drainage (examples are Parkdale and Oak Grove soils). Soils with poor irrigation potential are generally soils that have poor drainage (for example, clay soils found in draws - the Cumulic Haplaquolls). Whether any given area with good irrigation suitability is actually feasible to irrigate depends on additional factors as well: climatic considerations, and engineering and economic factors.

There are five irrigation districts wholly or partially within the Central Valley area. All the irrigation districts in the County, together with the amount of acreage within each that is irrigable and irrigated are listed below.

TABLE 2
ACREAGE IN HOOD RIVER COUNTY IRRIGATION DISTRICTS

	<u>Irrigable</u>	<u>Irrigated</u>
Dee Irrigation District	1,297.47	951.42
East Fork Irrigation District	10,400.00	8,525.00
Farmers Irrigation District	7,032.57	7,032.57
Middle Fork Irrigation District	8,000.00	6,373.81
Mt. Hood Irrigation District	1,330.51	1,090.00
	29,357.51	23,972.80

Source: Hood River Soil & Water Conservation District, 1978.

It should be noted that only a very small portion (approximately 10 percent) of the Farmers Irrigation District is within the Central Valley area; approximately 40 percent of the Middle Fork Irrigation District is within the Central Valley area; approximately 90 percent of the East Fork Irrigation District is within the area; and all of the Mt. Hood and Dee Irrigation Districts are within the Central Valley area. The sources of water for the five irrigation districts in the area are: East Fork I. D. – East Fork of the Hood River;

Middle Fork I. D. – Laurance Lake; Farmers I. D. – Kingsley Reservoir; Dee I. D. – West Fork of the Hood River; Mt. Hood I. D. – East Fork of the Hood River.

The Hood River Soil and Water Conservation District has identified sediment in irrigation water as being the major natural resource problem facing the County. Sediment in irrigation water lowers the efficiency of irrigation system and requires a greatly increased frequency of replacement of sprinkler heads. Sources of sediment in irrigation water include sand and glacial rock flour from Mt. Hood; erosion from logging-related activities in woodlands; and road construction for homesite and orchard access. Proposed replacement of the present open-ditch irrigation canals with piped systems would virtually eliminate all but the naturally-occurring sediment in irrigation water. Piped systems would also greatly reduce the large evaporation and seepage water loss presently occurring in Central Valley irrigation systems. Piped systems, however, are expensive to install. Dams and settling ponds upstream from irrigation district water diversion points can significantly reduce the presence of naturally-occurring sediment in irrigation water.

Poor irrigation water management has been identified by the Hood River Soil and Water Conservation District as a problem needing correction on 3,500 acres throughout Hood River County. The problem consists of inadequate distribution systems and lack of information and interest in irrigation water management techniques. Poor irrigation water management may take the form of over-irrigation, increased runoff and erosion.

Irrigation system-related problems also result from the encroachment of non-farm dwellings into farm-use areas. Irrigation systems were not originally designed for a large number of users with small acreages. Additional costs are incurred from the installation of many small spur lines to serve these non-farm users. A second problem for irrigation districts occurs when many non-farm acreages tap into the existing irrigation system. It requires more man-hours for the person controlling the dispersion of irrigation water in the system when there are more users, and there have been instances of non-farm users calling up the person dispersing water late at night with questions regarding their water allocation. (Source: Hood River Soil and Water Conservation District, 5-11-78).

Availability of irrigation water in the Central Valley area is usually good. On Gilhouley Road there is an orchard that does not have irrigation water. Virtually all other locations in the settled portion of the area that have soils with good irrigation potential have water available for irrigation. (Source: Oregon State University Extension Service, Hood River Office, 1978)

There are no irrigation districts within the Columbia Gorge area. There is a very limited amount of acreage that could make use of irrigation water.

I. Agricultural Economy:

Agriculture has long been an economic force in Hood River County. Horticulture products account for a large percentage of the agricultural income through the fruit industry. Better than 90% of the total agricultural income comes from tree fruits. The

general proximity of farms to the population centers, markets, and transportation networks enables farmers to compete favorably with other areas in the northwest.

See 20 Acre Justification Report for an in-depth, updated discussion of the Agricultural Economy.

J. Agricultural Land Use:

There is at the present time a limited amount of land clearing to plant new orchards. This is occurring in the Booth Hill area and in the Upper Valley. While some increase in orchard production can be expected in the future from additional orchard planting, in general increases in orchard production will come from more intense use of presently available land. A recent innovation that has allowed for more intensive use of presently available orchard land is wind machines. Each wind machine can benefit production on eight to ten acres. There is a tax break for conversion from smudging to wind machines.

Orchard land is not the only land required to be preserved in Exclusive Farm Use Zones. Many hay and pasture lands can be better managed. The Hood River Soil and Water Conservation district has identified poorly drained soils on hay and pasture land as being an important problem in areas throughout the County. This drainage problem affects approximately 2,000 acres in the County. Pasture and hay land management problems have been identified by the Soil and Water Conservation District to also include overgrazing, lack of reseeding, and inadequate weed control in several locations through the County. Specifically, rotation systems, timing of cuttings, and care taken in the seasonal use of wet pastures are needed improvements. On some pasture land, weed control has not been recently practiced because of the feeling that housing development was a potential use.

Agriculture in the Columbia Gorge area is limited. It is confined to grazing (primarily horse grazing) and poultry production. There is one poultry farm at Wyeth. It is a large commercial operation, in which feed is imported and used to fatten four large imported broods of chicks each year. Each of the four broods number approximately 73,000. Because of the odors associated with poultry operations, it is important that non-farm dwellings not be allowed to encroach into the area if land use conflicts are to be avoided and the poultry farm continue in production.

K. Land-Use Conflicts:

Several agricultural-related activities cause conflicts with non-farm residential land uses. Of particular relevance here are pesticide sprays and the early morning and late evening noise associated with applying them. Smudging, dust, and odors are sometimes a problem also. The conflict is not a one-sided one. Residential land uses detrimentally affect agricultural lands on occasion: trespassing, vandalism, fruit theft, and increased erosion due to creation of more impervious surfaces in residential areas are all of concern to farmers. The increased amount of traffic on roadways as a result of expansion of

residential land uses in farm areas also makes it more difficult for orchardists to spray without affecting persons traveling County roads.

Methods to minimize the land-use conflicts mentioned above include buffer zones and restrictions on the encroachment of residential uses into farm areas. Buffer zones are areas of land without structures, used to separate farm and non-farm land uses. They are generally on the property of the person(s) introducing the new land use into an area. The width of buffer zones established in any given area may be based on such factors as the type of agriculture, density of development, and wind patterns characteristic of the area. Restrictions on the encroachment of residential uses into farm areas may take the form of restrictions on the density of non-farm residential uses in an area.

L. Acreage Justification:

The County has justified a 20 acre minimum as being adequate for the continuation of existing commercial agricultural enterprises. The report is entitled “Background Report: 20 Acre Justification” and is included as a separate report under Background Reports, Goal 3.

M. Conclusions and Observations: Findings:

1. There are approximately 4,090 acres of land within the City/Westside area used presently for orchards.
2. Soils are of the utmost importance in deciding agricultural land use.
3. The prime orchard land in the City/Westside area is found in Oak Grove, Van Horn, Hood, and Wind River soils.
4. Some of the land classified I to IV by the Soil Conservation Service is not suitable for orcharding.
5. The Rockford soils area in the northern part of the City/Westside area is frequently poor for orcharding due to high winds and stoniness.
6. Low summer precipitation requires that supplemental irrigation be provided for late maturing and summer planted crops.
7. Irrigation water is available to all of the City/Westside area although in short supply in the northwestern corner.
8. Steep hillsides and mountainous areas are generally unsuited to orcharding.
9. The number of farms in Hood River County is decreasing.
10. Cropland is diminishing in numbers of acres.

11. Better than 90% of farm income is derived from the sale of horticultural products.
12. In 1974, agriculture contributed in excess of \$40,000,000 to the economy of Hood River County.
13. Areas with sewers already in place were not considered as agricultural due to the cost of relocating those capital improvements.
14. Agriculture and forestry-related activities are the principal economic bases of the City/Westside area.
15. Apples and pears are the primary crops grown in the Central Valley.
16. State Law requires that Class I to IV soils be zoned for Exclusive Farm Use (EFU) unless (a) land is no longer available for farm use because of development or irrevocable commitment to development, or (b) an exception to the LCDC Agricultural Lands Goal can be justified.
17. The Hood River Soil and Water Conservation District has identified sediment in irrigation water as being the major natural resource problem facing the County. Inefficient irrigation water delivery systems have also been identified as needing improvement.
18. The Hood River Soil and Water Conservation District has identified the following additional areas where improvements can be made: irrigation water management, drainage of hay and pasture land, and pasture and hay land management.
19. Availability of irrigation water is good in the Central Valley area.
20. Good cold air drainage is critical for orchard productivity. Wind machines and orchard heaters can help alleviate problems.
21. The total freight on board (F.O.B.) value of the Hood River fruit crop is \$77,836,000 (1979 figure).
22. Future increases in agricultural productivity will, for the most part, be the result of more intensive use of existing agricultural land rather than from clearing more land to be put into agricultural use.
23. The best use for most of the west slopes of Fir Mountain appears to be grazing and forestry.
24. Agricultural and residential uses are generally not compatible. Inhabitants of non-farm residences object to sprays, noise, smudging, dust and odors. Farmers object to trespassing, vandalism, crop theft and increased erosion.

25. Because of farming and the value added to farm products from packing and processing, agriculture-related activities help provide jobs and income for a wide sector of the local economy through the “multiplier effect”.
26. Agriculture is a very limited activity in the Columbia Gorge area. However, there is some grazing and one large poultry farm.
27. Soils in the Columbia Gorge area are for the most part not high in agricultural capability.
28. There are no irrigation districts within the Columbia Gorge area.
29. See additional comments in Subsection “F”, Agricultural Lands Inventory, numbers 1 through 4.
30. See additional Conclusions (A through Q) in 20 Acre Justification Report.

GOAL 3: BACKGROUND REPORT; 20 ACRE JUSTIFICATION

I. Introduction:

The County has provided justification for the 20 acre minimum area requirement of the EFU Zone. The justification shows that the minimum area requirement is appropriate for the continuation of the existing commercial agricultural enterprises. It is felt that through this justification all divisions of agricultural land will be consistent with Goal 3 and ORS 215.

II. Discussion:

A. General

For brevity the reader may choose to read Section III., Conclusions and IV., Recommendations, which are at the end of this report.

The following agricultural characteristics were briefly analyzed to further justify the Exclusive Farm Use Zone, 20 acre minimum area requirement: (1) Agricultural Income; (2) Processing and Marketing; (3) Agriculture's Contribution to County's Economy; (4) Farm Value; (5) Types of Agricultural Crops; (6) Harvested Areas; (7) Farm Sizes for Croplands and Livestock; (8) Acreages from Farm Classes 501, 502, and 503; (9) Parcel Sizes; County Study Areas; (10) Orchard Sizes, Diamond Fruit Growers; (11) Operator by Principle Occupation; (12) Operator by Place of Residence; and (13) Rental Acres.

Some of the above characteristics will be primary indicators further justifying the 20 acre minimum while others such as operator by place of residence and occupation will not necessarily justify the 20 acre minimum.

Appreciation is extended to Dave Burkhart, County Extension Agent; Jim Klahre, Consultant; Jack Spitzmesser, Farmer; and Jim Pease, OSU Extension Service, Corvallis for their timely assistance.

The identification of a suitable acreage requirement to maintain a commercial agricultural enterprise is not an exact science due to the numerous variables involved. Some Oregon counties have spent years trying to identify an acreage size to maintain commercial agricultural enterprises. Concerned individuals feel that (2) or more zoning districts with differing minimum acreage requirements are necessary due to the differing capabilities of soils to produce crops or different topographical or geographical areas throughout the County. Obviously, additional research must be completed before several "farming" zoning districts are added to the County's ordinance.

Although the following additional justification for the 20 acre minimum will not be a panacea and meet the desires of all concerns, it is felt it will meet the requirements of the LCDC.

B. Agricultural Income

1. Estimated Agricultural Income:

Overall, the estimated County agricultural income from farm marketing beginning in 1978, included: 1978, \$31,500,000; 1979, \$39,482,000; 1980, \$38,009,000; 1981, \$34,625,000; and 1982, \$37,934,000.¹ In 1981, Hood River County ranked approximately 18th in the State regarding gross farm sales derived from all agricultural commodities with a preliminary total of \$34,625,000.² Marion County ranked first with gross farm sales of \$189,586,000.³ However, in 1981, the County ranked first in the State regarding gross sales from orchards with a total of \$31,484,000. The other three top counties included: (1) Jackson, \$13,706,000; (2) Wasco, \$10,846,000; and Yamhill, \$7,120,000.⁴ The County was also ranked first in 1980.

Table 1 shows 1982 agricultural type, fruit production, market value per type; and percentage of value associated with each type.⁵

Table 1 further indicates that approximately 92% of the county's estimated farm value marketing for 1982 was derived from fruit (orchards) while the remaining 8% was derived from livestock and livestock products, specialty crops (Christmas trees, forestry, nursery, etc.), berries and vegetables, and hay and forage. In 1981, 91% of all farm income was attributed to fruit commodities.

2. Processing and Marketing:

The value of fruit, once it leaves the orchard, more than doubles once it is canned, and slightly less than doubles in value once it is packed. It can

¹ Oregon State University Extension and County Extension Offices; Bureau of Census, 1978; OSU Extension Service, Jim Pease, September, 1982; 1981-1982 Annual Report, Hood River County Extension Staff.

² 1981 Preliminary Counts, Oregon County and State Agricultural Estimates, Special Report 651, Oregon State University Extension Service, January, 1982.

³ 0p cit.

⁴ 0p cit.

⁵ Statistical Information, Hood River County, compiled by Hood River County Extension Office, June, 1982. These figures are indicators only.

TABLE 1

AGRICULTURAL CROPS AND ESTIMATED INCOME FROM FARM MARKETING 1982¹

<u>Agricultural Type</u>	<u>Production</u>	<u>Value</u>	<u>% of Value</u>
a. Fruit			
winter pears	3,056,250 boxes	16,022,000	
apples	2,486,000 boxes	10,938,000	
bartletts	52,000 tons	5,200,000	
cherries	3,600 tons	2,268,000	
peaches	1,000 tons	115,000	
local sales		250,000	34,793,000
			91.70
b. Hay and Forage		135,000	.40
c. Berries and vegetables		184,000	.50
d. Specialty products (Christmas trees, forestry, nursery, etc.)		770,000	2.00
e. Livestock and Livestock Products		2,052,000	5.40
TOTAL 1982 ESTIMATED AGRICULTURAL INCOME		\$37,934,000	100 %
ESTIMATED F.O.B. (FREIGHT ON BOARD) – COUNTY FRUIT CROPS		\$75,000,000	

¹ Source: Hood River County Extension Office, Statistical Information, June 22, 1982 (all figures are generalized and considered indicators only).

thus be seen that fruit packing and processing is a key element in the local economy, providing jobs and considerable income. This income, through the multiplier effect, benefits other sectors of the economy. Adding the value of canning and packing to the fruit after it leaves the orchards, makes a total F.O.B. (freight on board) value for the Hood River fruit crop of \$77,836,000 (1979 figures), and \$75,000,000 (1982 figures). Additional information regarding the agricultural economic section is noted in the County's original submittal, August, 1980.

3. Contribution to Area's Economy:

Agriculture is one of five major industries which dominates the County's export sector. Nearly 86% of the total production is exported. This high level of exports emphasize the big role of agriculture as a primary source for bringing export dollars into Hood River which can then be respent in the local market. In 1979, wage and salary income in agricultural-related industries was about \$37.5 million. The total multiplier effect on the local economy was estimated at about \$53.2 million (1979).⁶

4. Market Value of Products Sold:⁷

Total market value in 1978 was approximately \$31,500,000. Approximately 17% or \$5,397,000 of the total market value was derived from farms varying from 1 to 39 acres in size. The largest farm size contributor, 80 to 159 acres, accounted for 27.6% of all market value (\$8,699,000). The 40 to 79 acre category was second with 25.4% (\$7,997,000).

Information in Table 6 regarding livestock commodities shows that over 62% of the total livestock market value was derived from grazing farm in the 1 to 39 acre category, while for husbandry 99% of market value was derived from farms in the same category.

5. Farm Value:

Table 2 shows that the average value/acre of farm has risen 470% since 1959 and has more than doubled between 1974 and 1978. As farm prices continue to rise, the cost of purchasing large parcels will become prohibitive to all but the large farming operation and the small farmer could be phased out.

⁶ Pacific Economica; Hood River County – An Analysis of Alternative Economic Futures, November, 1981.

⁷ 1978, Bureau of Census; for all farms, even those with farm sales under \$2,500.

Table 3 shows an increase in market values and farm production expenses. Market values rose 178% between 1969 and 1974; and farm production expenses increased 143% in the same time period. It is not known whether farm expenses include taxes on the land, which will increase as the value of land and building increases. Also, the farmer does not receive as profit all the difference between the market value of his produce and the production cost of that produce. A certain percentage of this profit goes to those who process, package, transport, and market the farm products.

C. Agricultural Crops

1. Crops and Harvested Acres:

Data provided in Tables 1, 4, 5, and 6, by the Bureau of Census and the OSU Extension Service identify that the following primary crops are harvested in Hood River County: (1) tree fruits; (2) hay and silage; (3) berries and grapes; (4) specialty crops; and (5) vegetables. Overall orchard land accounts for approximately 88% of all harvested acres and 92% of all farm value. Obviously of the total acreage in livestock production, portions as noted below will be utilized for harvested crops (e.g., hay and silage).

As noted in Table 1, the main orchard or fruit crops are pears and apples. The D'Anjou pear is the main winter pear variety grown in the County. This fruit is packed fresh and shipped throughout the United States and overseas markets. Bartletts, the second most important pear variety, is raised primarily for processing. Other pear varieties include Bosc, Comice, Forelle and Seckel.

Red Delicious, Gold Delicious and Newtowns constitute the main apple varieties produced in the Mid-Columbia area. Apples are primarily grown for the fresh market, however, some tonnage is processed each year. Cherries, peaches, and small fruits are also produced in the County.⁸

Table 4 below shows that in 1981 approximately 17,435 acres were harvested and of those 15,210 acres or 87% of all harvested acres were orchard lands. In 1981, the County led the State in harvested acres of orchard land. The other (3) top counties included: (1) Jackson, 10,635 acres; (2) Washington, 10,020 acres; and (3) Yamhill, 9,560.⁹ Also in 1980, the County led the State in harvested acres of orchard land. Table 4 further shows that in 1980 orchard land accounted for approximately 88% of all harvested acreage.

⁸ 1981 Annual Report of the Hood River County Extension Staff.

⁹ 1981 Oregon County and State Agricultural Estimates, OSU Extension Service, special report, 651, January, 1982.

TABLE 2 ¹

FARM SIZE AND VALUE, HOOD RIVER COUNTY 1959, 1964, 1969, 1974, AND 1978

SUBJECT	1959 ⁴	1964 ⁴	1969 ¹	1974 ²	1978 ³
Approximate Acres of Land Area	338,560	338,560	338,976	334,976	334,720
Proportion in Farms	10.8%	9.5%	8.9%	7.5%	8.0%
Total Number of Farms	782	641	538	480	519
Acres in Farms	36,683	31,966	29,673	25,204	26,788
Average Size of Farms	46.9	49.9	55.1	53.0	52.0
Value of Land and Buildings	\$22,559,136	\$31,149,395	\$36,479,388	\$48,811,000	—
Average per Farm	\$28,348	\$48,595	\$67,805	\$101,690	\$217,781
Average per Acre	\$657.59	\$1,071.75	\$1,229.37	\$1,937.00	\$4,411.00

Source: ¹ U.S. Bureau of the Census, Census of Agriculture, 1969, Vol. 1 Area Reports, Part 47, Oregon, (U.S. Government Printing Office, Washington) page 113.

² U.S. Bureau of the Census, Census of Agriculture, 1974, Volume 1, Part 37, Oregon, State and County Data (U.S. Government Printing Office, Washington), page IV – 85.

³ U.S. Bureau of the Census, Census of Agriculture, 1978, Volume 1, State and County Data, Part 37, Oregon, (U.S. Government Printing Office, Washington), page 234.

⁴ Oregon Economic Statistics, 1975, Bureau of Business Research, University of Oregon, Eugene, Oregon.

TABLE 3

FARM VALUE AND PRODUCTION EXPENSES

SUBJECT	1959	1964	1969	1974	1978
Market Value of Agricultural Products Sold for all farms	N/A	6,564,550 ¹	12,851,000 ²	24,418,000 ²	31,500,000 ³
Average per Farm	N/A	10,241 ¹	23,886 ²	42,538 ²	60,694 ³
Farm Production Expenses (Total) for All Farms	N/A	N/A	11,279,281 ¹	14,400,000 ²	14,827,000 ³ (Selected only – No Total)
Average per Farm	N/A	N/A	20,965 ¹	30,000 ²	N/A

SOURCE: ¹ U.S. Bureau of Census, Census of Agriculture, 1969, Volume I Area Reports, Page 47, Oregon, (U.S. Government Printing Office, Washington, D.C.), page IV - 85.

² U.S. Bureau of Census, Census of Agriculture, 1974, Volume I, part 37, Oregon, State and County Data (U.S. Government Printing Office, Washington), page 113, 114.

³ U.S. Bureau of Census, Census of Agriculture, 1978, Volume I, State and County Data, Part 37, Oregon (U.S. Government Printing Office, Washington) page 234 and 235.

TABLE 4
HARVESTED ACREAGE - HOOD RIVER COUNTY
1980-1981

Agricultural Type	1980 Acres / % Total		1981 Acres / % Total	
Tree fruit and nuts	15,010	88.16	15,210	87.23
Hay and forage	1,950	11.45	2,150	12.33
Small fruit and berries	42	.25	45	.29
Vegetables	24	.14	26	.15
TOTAL	17,026 Acres, 100%		17,435 Acres, 100%	

Source: 1980-1981 Oregon County and State Agricultural Estimates Special Reports 607 and 651; March, 1981 and January, 1982. The above source does not provide acreage estimates for many specialty crops, pastures and range land areas.

2. Livestock and Livestock Products:

Table 1 shows that total 1981 gross farm sales for Hood River County were \$37,934,000. Approximately 5+% (\$2,052,000) was derived from livestock and livestock products, while over 90% was derived from orchard lands. Sales were derived from the following primary livestock commodities: (1) cattle and calves; (2) dairy products; (3) eggs; poultry; and (4) miscellaneous animals. Cattle and calves were the primary contributor.

Over 62% of total market value was derived from grazing farms in the 1-39 acre category; while for husbandry, 99% of market value was derived from farms between 1-39 acres in size. (See Table 6.)

D. Farm Operation Acreages

1. Introduction:

To assist in further identifying commercial agricultural acreage size the following indicators were analyzed: farm size; harvested cropland acreages; livestock acreages; farm class (502 and 503); County study areas; orchards: Diamond Fruit Growers; and hobby farms.

2. Farm Size:

Four ways of looking at “farm size” include:

- a. “Average Farm Size” takes all acres in farm use divided by the number of farms. Farms may consist of several non-contiguous parcels.
- b. “Average Ownership Size” takes all acres in farm use and divides by number of owners. For example, parcels owned by John C. Does and Joseph G. Doe would be considered two separate ownerships, but may comprise the Doe Brothers Farm. One ownership size does not necessarily mean one farm size, as illustrated above. One ownership size may consist of several non-contiguous parcels.
- c. “Average Parcel Size” takes all acres in farm use and divides by the number of parcels. Parcels includes all contiguous tax lots in one ownership, but does not include entire ownership as one parcel, if in fact the ownership consists of two or more non-contiguous parcels. This is what must be considered when a determination is made as to a suitable minimum lot size

requirement. The average parcel size will always be less than or equal to the average farm size.

- d. “Average Tax Lot Size” takes the number of acres in farm use divided by the number of tax lots. This computation is helpful in determining how many tax lots usually comprise a parcel.

The average parcel size is a primary indicator of a commercial agricultural enterprise. According to Table 7 the average parcel size for all farm parcels (as they are classed in the 1981 assessment) in the County is 23.20 acres. Average ownership size is 26.34. This figure may not correlate with “farm” size as given in the Census of Agriculture as several ownerships may comprise a “farm”.¹⁰

3. Harvested Croplands:

Table 5 shows average acres per farm for harvested croplands. All are below 39 acres in size. They include: (1) orchards, 38 acres; (2) hay and silage, 15 acres; (3) berries and grapes, 3 acres; (4) specialty crops, 16 acres; and (5) vegetable crops, 11 acres. Over 50% of all orchard farms are between 1-39 acres in size, while hay and silage account for 67%.

4. Livestock and Livestock Products:

Table 6 shows that the average acreage size for Extensive farms (Grazing) is 49 acres, while for Intensive farms (husbandry), 15 acres. Furthermore, 74% of all Extensive farms were between 1-39 acres in size, while 97% of Intensive Farms were between 1-39 acres in size.

5. Farm Class 501, 502, and 503: Records and Assessment:¹¹

Farm classes 501, 502 and 503 are defined below. Table 7 shows the amount of land in class 503 as being very much larger than the amount in either 501 or 502. This is because much of the land in the County as of 1981 was not in a qualified EFU Zone. Much of land in 503 will shift to 502 in 1982 assessment, as the EFU zoning has been applied to over 29,000 acres.

¹⁰ Census of Agriculture – (1975 definition) property which obtains \$1,000 or more in income from farming (previous definition counted a farm as any place with less than 10 acres selling \$250.00 or more in agricultural products or more than 10 acres from which \$50.00 of agricultural goods were sold during the census years. Also Census of Agriculture presents substantial information only on farms with income of \$2,500 or more.

¹¹ Definition of 501, 502, and 503 as provided by County Assessment Office:

501 – Farming but not in farm use deferral, not in EFU Zone.

502 – In farm use and farm use deferral; and in EFU Zone.

Automatic if farming with intent to make a profit. No income requirement.

503 – Must be farming and in farm use deferral. Not in EFU Zone and must meet income requirement.

TABLE 5
HARVESTED CROPLANDS¹

	Total Farms	Acreage	Average Per Farm	Farms 1-19 acres	20-39 Acres	40-79 Acres	80-159 Acres	160-319 Acres	320 or More	Comments
Orchards	390	14,933	38	102	100	104	57	24	3	Average parcel size 38 acres; 52% of farms are between 1-39 acres.
Hay & Silage	142	2,154	15	52	43	27	10	6	4	Average parcel size, 15 acres; 67% of farms are between 1-39 acres
Berries and Grapes	19	30	2	9	3	3	4			Average parcel size, 2 acres; 64% of farms are between 1-39 acres.
Specialty Crops	5	82	16	2			3			Average parcel size, 16 acres.
Vegetable	4	44	11	1		2	1			Average parcel size 11 acres.

¹ 1978 Bureau of Census; OSU Extension, 1982.

TABLE 6
LIVESTOCK AND LIVESTOCK PRODUCTS¹

	Total Farms	Acreage	Average per Farm	Farms 1-19 Acres	20-39 Acres	40-79 Acres	80-159 Acres	160-319 Acres	320 or More	Comments
Extensive Animal Grazing ²	77	3,751	49	34	23	13	3	1	3	74% of farms are 1-39 acres in size.
Market Value of products sold (\$1,000)	374			93	138	72				62% of market value derived from farms 1-39 acres in size.
Intensive Animal Husbandry ³	34	506	15	24	9	1				97% of farms are 1-39 acres in size.
Market Value of Products sold (1,000)	496			62	432					99% of market value derived from farms 1-39 acres in size.

¹ 1978 Bureau of Census; OSU Extension, 1982.

² Extensive defined: includes Standard Industrial Classification codes and numbers relating to: beef cattle, except feedlots; sheep and goats; livestock except dairy, poultry, and animal specialties and horses and other equines.

³ Intensive: includes Standard Industrial Classification codes and numbers relating to: beef cattle feedlots; hogs, poultry and eggs; fur bearing animals and rabbits and other animal specialties.

TABLE 7

FARM CLASS (501, 502 AND 503)

FARM CLASS #	501	502	503	TOTAL (501,502 & 503)	TOTAL ¹ (502 & 503)
TOTAL # ACRES	768.5	4,524.34	21,301.53	26,594.37	25,825.87
TOTAL # PARCELS	34	188	929	1,151	1,117.00
TOTAL # OWNERSHIPS	32	166	768	896 ²	864.00
TOTAL # TAX ACCOUNTS	47	258	1,503	1,808	1,761.00
AVERAGE PARCEL SIZE	22.60	24.07	22.93	23.20	23.50
AVERAGE OWNERSHIP SIZE	24.02	27.26	27.74	26.34 ³	27.50
AVERAGE TAX ACCOUNT SIZE	16.35	17.54	14.17	16.02	15.85
% OWNERSHIP CHANGED # CHANGED	8% (3)	25.3% (42)	25% (192)		

SOURCE: Hood River County Department of Records and Assessments, 1982.

¹ Note column totaling only the 502 and 503 information: parcels in the 501 property class are in farm use but are not necessarily being farmed with intent to make a profit. If they were, they would probably apply for the farm tax deferral and be reclassified as 503. When discussing commercial farm parcels, only class 502 and 503 lands should be considered. It is obvious from Table 7 that most people who are farming are either making a profit or are farming with the intent to make a profit.

² Total number of ownerships does not add up for all three classes because some ownerships fall into 2 or 3 classes and are only counted once. These figures do not take into account the number of parcels that have changed ownerships.

³ Some of the ownerships will combine together to equal one family farm. There is no way to know how the ownerships are combined.

The assessors office further identifies lands in property classes 501, 502 and 503 by farm use classifications, according to the use they would be best suited for. Lands classed as “good orchard” or “orchard” comprised 14,178.28 acres, or 53.3% of all lands in farm use. Table 7 shows total acreage in farm use as 26,594.37 acres. This figure compares closely with figures given in the 1978 Census of Agriculture (page 238). This correlates with data in Table 5. This study shows 14,933 acres of orchard land were harvested on all farms. The number of farms that are in orchard total 390, which would give an average farm size of 38 acres. These lands would be protected by the 20 acre zoning.

A random check of the largest parcels in the 502 property class shows them to be in orchard use, as opposed to some other less intensive use (hay, pasture, etc.). The Census of Agriculture data mentioned above confirms that from the information gathered, orchards comprise by far the largest single agricultural use in the County. There doesn't appear to be a significant amount of land in other commercial agricultural uses that would require larger parcel sizes than the 20 acre zoning would allow.

In summary, data provided in Table 7 identifies that in Farm classes 502 and 503, the average parcel size is 23.50 acres, while the average ownership size is 27.50 acres.

6. Study Areas:

To assist in gathering additional indicators identifying commercial lot sizes, the County analyzed (3) sub-areas located in the following areas: (see Attachment “A” Study Areas - Index Map) (1) Dethman Ridge-Ehreck Hill; (2) Willow Flat; and (3) Parkdale. Some factors taken into consideration in selecting the areas included: (1) orchard use is the predominant agricultural crop in the County, consequently commercial sizes would have to be primarily oriented around farms in orchard use; (2) primary soil types I-IV; (3) approximate size of study areas, 900± acres; (4) assistance from the County Extension Office in identifying the areas; (5) number of parcels and ownerships; and (6) acreages under (1) acre were not included.

Table 8 shows that the overall average parcel size is 31.98 acres and the average ownership size, 32.86 acres. The smallest parcel and ownership sizes 20.67 acres and 22.14 acres are noted in the Parkdale area whereas the largest parcel and ownership sizes, 45.35 and 43.19 acres are noted in the Willow Flat area.

TABLE 8

STUDY AREAS - AVERAGE PARCEL AND OWNERSHIP SIZE

<u>Location</u>	<u>Average Parcel Size (Acres)</u>	<u>Average Ownership Size (Acres)</u>
Willow Flat	43.35	43.19
Dethman Ridge-Ehrck Hill	29.93	33.26
Parkdale	20.67	22.14
AVERAGE SIZE	31.98 acres	32.86 acres

Source: Hood River County Planning Department and County Records and Assessments, 1982.

Table 9 shows acreages and number of parcels. Overall percentages of parcels over 1 acre but under 40 acres per study area included: Dethman Ridge-Ehrck Hill, 67%; Willow Flat, 55%; and Parkdale, 89%. Approximately 75% of all parcels are above 1 acre but under 40 acres; 18%, 40 to 59 acres; 5%, 60 to 79; and 2%, 80+ acres.

TABLE 9

STUDY AREAS - ACREAGES AND NUMBER OF PARCELS

<u>Acreages¹²</u>	<u>Dethman Ridge</u>	<u>Willow Flat</u>	<u>Parkdale</u>	<u>TOTAL</u>
1.01 - 4.99	5	3	10	18
5.00 - 9.99	3	1	8	12
10.00 - 19.99	7	3	9	19
20.00 - 39.99	5	4	13	22
40.00 - 59.99	7	6	4	17
60.00 - 79.99	3	1	1	5
80.00+	0	2	0	2
TOTALS	30	20	45	95

Source: Hood River County Planning, and Records and Assessments Departments, 1982

¹² Acreages: parcels in .01-1.00 acre category respectively included: (13), (4), and (4) for a total of 21 parcels.

7. Diamond Fruit Grower Orchards:

Table 10 shows that the average orchard acreage size for a Diamond Fruit Grower is 38.80 acres. Furthermore, 60% of all growers have orchards varying in size from 1 to 39 acres, while the dominant number of orchards/growers are noted in the 20 to 29 acre category.

TABLE 10

1980 DIAMOND FRUIT GROWERS' ORCHARDS

<u>Acres</u>	<u>Number of Orchards</u>
0 - 9	26
10 - 19	27
20 - 29	28
30 - 39	22
40 - 49	24
50 - 59	18
60 - 69	7
70 - 79	2
80 - 89	3
90 - 99	2
100 - 124	10
125+	<u>4</u>
	173 growers

(TOTAL 6,714 ACRES
AVERAGE PER ORCHARD = 38.80 ACRES)

Source: J.E. Klahre; 1969-80 Fruit Growing Costs and Margins in the Hood River Valley, Oregon, prepared for Diamond Fruit Growers, Inc.

8. "Hobby Farm":

Due to time constraints, removing small "hobby farm" parcels from the average parcel size was not completed. A determination of what constitutes a "hobby farm" versus a "commercial farm" would include analyzing such factors as; production/acre, production costs, percent of land being farmed on each parcel, income derived through the farming

operation. These factors would vary with soil types, management practices used, amount of capital invested, types of produce grown, etc.

However calculations were done on lands currently in property class 502 to determine the most frequently occurring lot sizes and average lot sizes with the smaller parcels removed. The most frequently occurring lot size was from 5.01 to 10 acres. Only 16% of all farm parcels in this class were 40 acres or over. The 20 acre minimum lot size would protect 84% of all these farm parcels from being divided further. If all parcels below 10 acres are removed from the calculations (5.01 - 10 acre being the most frequently occurring size), the average parcel size still remains below 40 acres, at 33.72 acres.

E. Operator by Principle Occupation:¹³

Of farms with sales of \$2,500 or more (397 total farms), farming is the principle occupation of 68% of the operators, whereas 32% of the operators were involved in other occupations. About 50% of farms between 1 and 39 acres in size are operated by farmers whose principle occupation is farming. An increase in the principle occupation of operators is noted in farms that are 40 to 79 acres in size.

F. Operators by Place of Residence:¹⁴

Approximately 335 farms or 85% of all farms have an on-farm operator residence, while 9% do not (6% did not report). The operators residences could obviously be the owner's residence and vice-versa. Approximately 47% of all farms between 1 and 39 acres in size have an on-farm operator residence. The majority of farms with on-farm operator residences occur within the 40 to 79 acre farm size category.

G. Rented Acres Operated:¹⁵

Approximately 2,446 acres of farm land were rented by 73 farms. Overall, this indicates that approximately 10% of the agricultural land base consists of rented or leased land. Approximately 10% of lands within the 1 to 39 acre category are rented or leased. The County allows renting and leasing without land divisions and if no additional dwellings are built. The majority of rented or leased acreage is noted in farm sizes varying from 80 to 159 acres.

III. Conclusions:

- A. The following agricultural characteristics were analyzed to further justify the 20 acre minimum: (1) Agricultural Income; (2) Processing and Manufacturing; (3)

¹³ 1978 Bureau of Census.

¹⁴ Op. cit.

¹⁵ Op. cit.

Agriculture's Contribution to the County's Economy; (4) Farm Value; (5) Types of Agricultural Crops; (6) Harvested Acres; (7) Farm Sizes for Croplands and Livestock; (8) Acreages from Farm Classes 501, 502 and 503; (9) Farm Parcel Sizes, County Study Area; and (10) Orchard Size, Diamond Fruit Growers.

- B. The minimum lot size in the EFU Zone must allow existing commercial agricultural enterprises to continue. It is assumed that anyone who makes an income from a farming endeavor as defined in ORS 215.203 is considered a commercial agricultural enterprise.
- C. While a farmer must be able to purchase land in large enough parcels to make an adequate income and farm in an efficient manner, minimum parcel sizes allowed in the EFU Zone must not be so large that they prohibit the small scale or part-time farmer from purchasing farm property. For example, a new orchardist may be able to purchase one 20 acre parcel, then after the orchard is producing, purchase one or more additional 20 acre parcels, whereas the initial outlay of funds for a larger parcel, say 40 acres or more, may prohibit him from ever getting his farming operation started. The capital outlay of funds to purchase and develop a larger parcel could be prohibitive to all but the large established farm operation.
- D. A 40 acre farm (orchard) would probably provide enough income to cover all the operating costs and provide an adequate livelihood for a family. Orchards of less than 40 acres would probably require a special intensive management before farmers could derive their sole means of income from them. Orchards of much less than 40 acres would probably be operated by part-time farmers that have other sources of income.
- E. As farm prices continue to rise, the cost of purchasing large parcels will become prohibitive to all but the large farming operations and the smaller farmer could be phased out.
- F. Justification of a minimum acreage requirement to maintain commercial agricultural enterprises within the County is not an exact science due to the numerous variables involved. As the County's planning program becomes more refined, additional research could justify additional farm zones.
- G. In 1982, approximately 92% of the County's estimated farm marketing value was derived from fruit or orchard land while the remaining 8% was derived from livestock and livestock commodities, specialty crops, berries and vegetables and hay and forage. In 1981, 91% of all farm income was attributed to fruit commodities.
- H. Agriculture is a major industry which dominates the County's export sector. Nearly 86% of the total production, which is primarily orchard crops, is exported.

In 1979, the total multiplier effect on the local economy was estimated to be about 53.2 million.

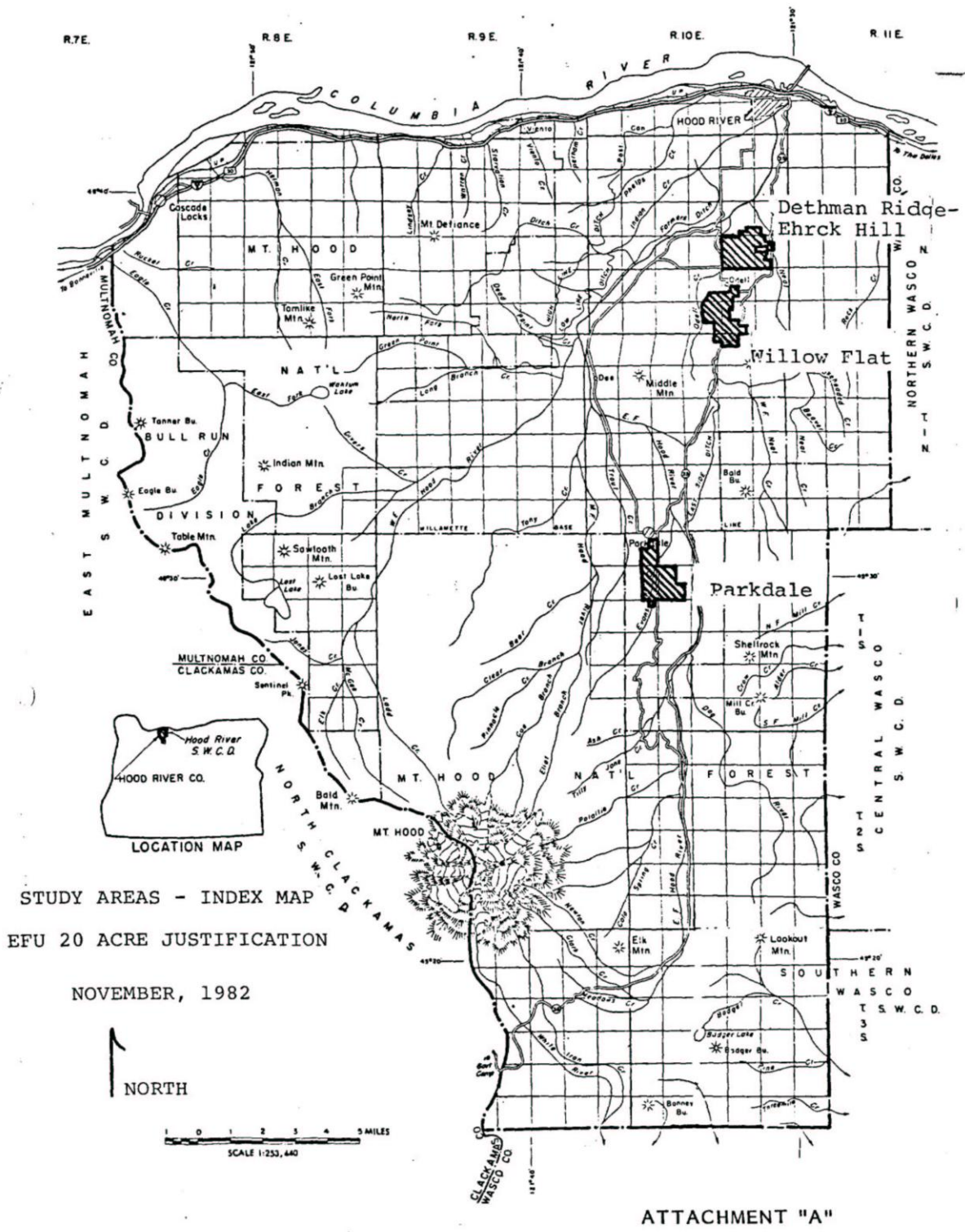
- I. Orchard produce is the major agricultural product exported consequently orchard land is of substantial importance to the local economy.
- J. Concerning livestock commodities, over 99% of market value was derived from husbandry farms between 1 to 39 acres in size, while 62% of total market value was derived from grazing farms in the 1 to 39 acre category.
- K. Fruit commodities have a substantial positive impact on processing and marketing. The value of fruit once it leaves the orchard, more than doubles once it is canned and slightly less than doubles in value once it is packed. Fruit packing and processing is a key element in the local economy providing jobs and considerable income. Also this income, through the multiplier effect benefits other sectors of the economy. Total F.O.B. (Freight on Board) value for the Hood River fruit crop; 1979, \$77,836,000 and 1982, \$75,000,000.
- L. Between 1978 and 1982, the primary harvested crops in Hood River County included: (1) tree fruits; (2) hay and silage; (3) berries and grapes; (4) specialty crops; and (5) vegetables. Overall, orchard land accounted for 88% of all harvested acres and 92% of all farm value.
- M. County Records and Assessments information pertaining to Farm Classes 502 and 503 states that the average parcel size is 23.50 acres, whereas the average ownership size is 27.50 acres:
- N. Average farm acreage sizes for primary agricultural types in the County include the following: (1) tree fruits, 38 acres; (2) hay and silage, 15 acres; (3) berries and grapes, 3 acres; (4) specialty crops, 16 acres; (5) vegetables, 11 acres; (6) grazing farms, 49 acres; and (7) husbandry farms, 15 acres. Orchard land is the overall primary agricultural type and accounts for 92% of total agricultural market value in the County, consequently it is assumed that the 20 acre minimum lot size will protect the primary agricultural base in the County. Parcels under 40 acres in size, for example, 39 acres, could not be further partitioned.
- O. Data from three agricultural areas in the County (i.e., (1) Willow Flat; (2) Dethman Ridge-Ehrck Hill; and (3) Parkdale) stated that the overall average parcel size to be 31.98 acres and ownership size 32.86 acres. Overall percentages of parcels over (1) acre but under (40) acres per study area included: Dethman Ridge-Ehrck Hill, 67%; Willow Flat, 55%; and Parkdale, 89%.

In summary, approximately 75% of all parcels are above 1 acre but under 40 acres in size.

- P. The average orchard size per a Diamond Fruit Grower is 38.80 acres. Furthermore, 60% (i.e., 103 growers) of all growers (i.e., 173 growers) have orchards varying from 1 to 39 acres in size. The dominant number of orchards are noted in the 20 to 29 acre category.
- Q. The 20 acre minimum lot size is appropriate for the continuation of existing commercial enterprises based upon the following indicators:
1. Economic indicators identifying orchard land as a primary influence upon the County's economy include: (a) a substantial portion of agricultural income is derived from orchard land; (b) orchard land is the County's dominant agricultural type; (c) orchard land dominates the County's processing and marketing sector; and (d) orchard land substantially contributes to the County's export sector.
 2. Acreage indicators include: (a) Farm class information, County Records and Assessments; (b) Average Cropland acres per Farm; (c) County Orchard Land Study Areas; and (d) Data from Diamond Growers' Orchards.

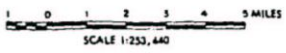
IV. Recommendations:

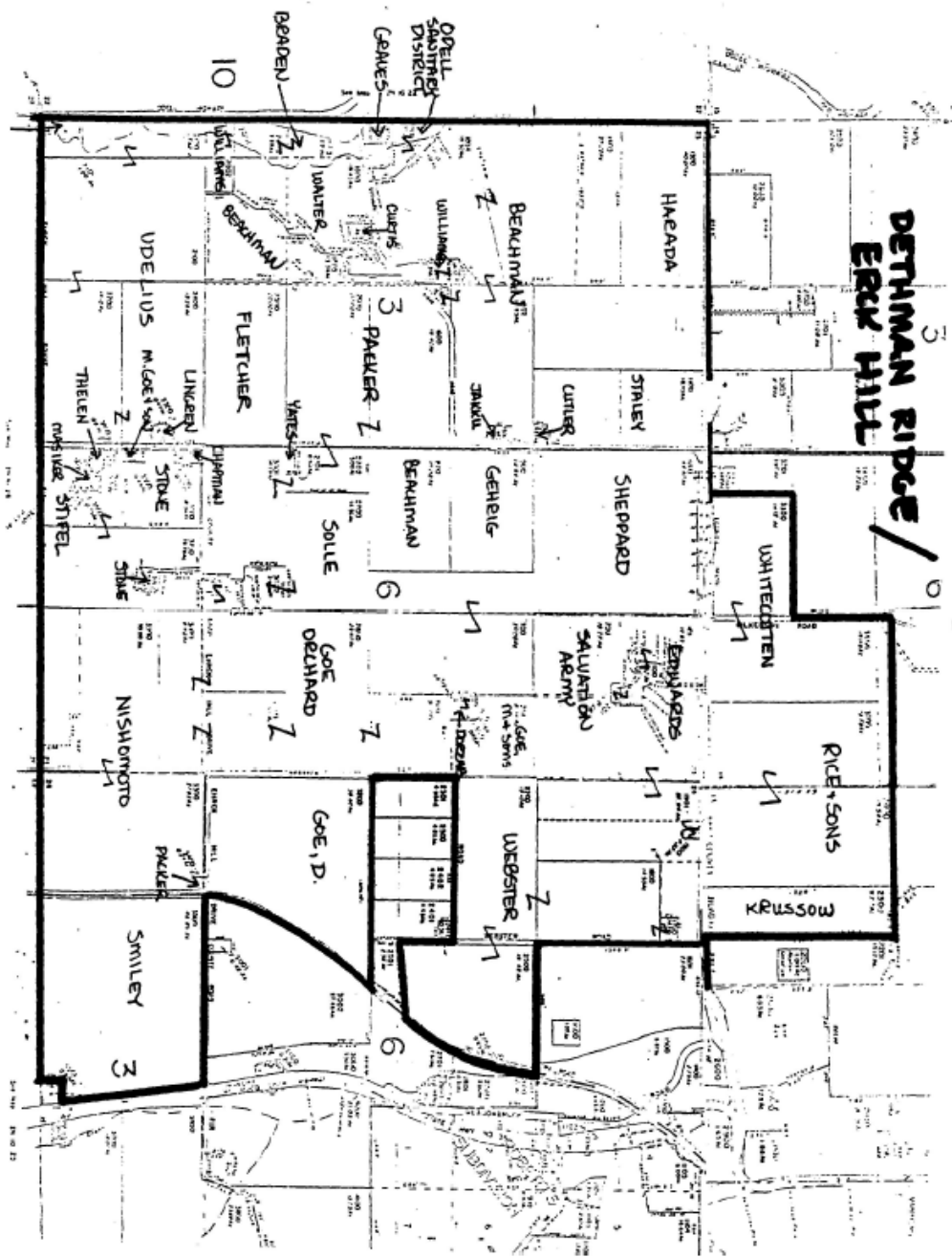
- A. Maintain EFU Zone minimum lot size requirement at 20 acres. This requirement would prevent parcels of 39.99 acres or less from being divided, and would allow existing commercial farm practices to continue.
- B. Add the following policy to Goal 3 - Agricultural Lands:
- “The minimum area requirement in the EFU Zone shall be 20 acres.”
(Justification for the 20 acre minimum area requirement is presented in the Background Report; Goal 3: BACKGROUND REPORT: 20 ACRE JUSTIFICATION).

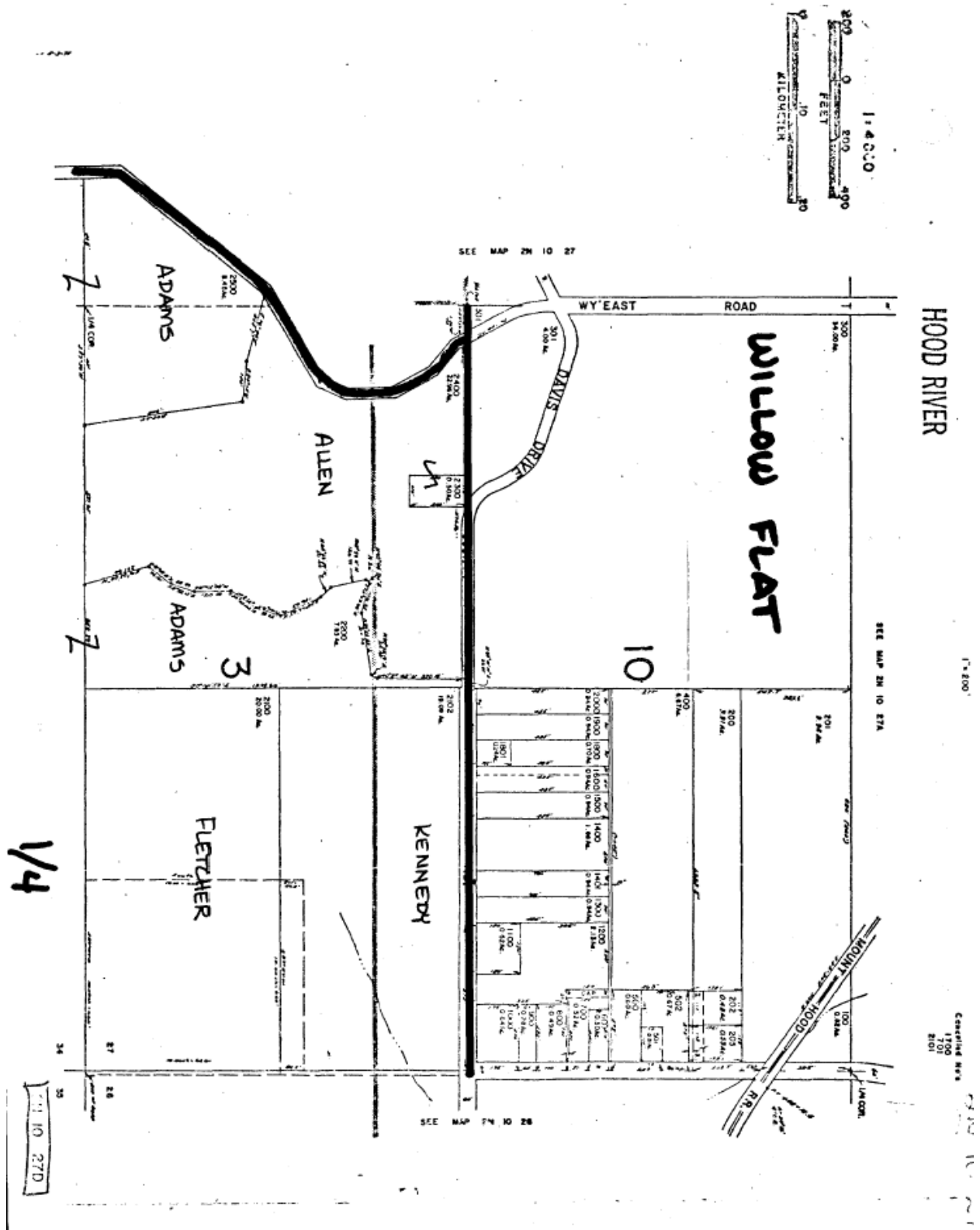


STUDY AREAS - INDEX MAP
 EFU 20 ACRE JUSTIFICATION

NOVEMBER, 1982



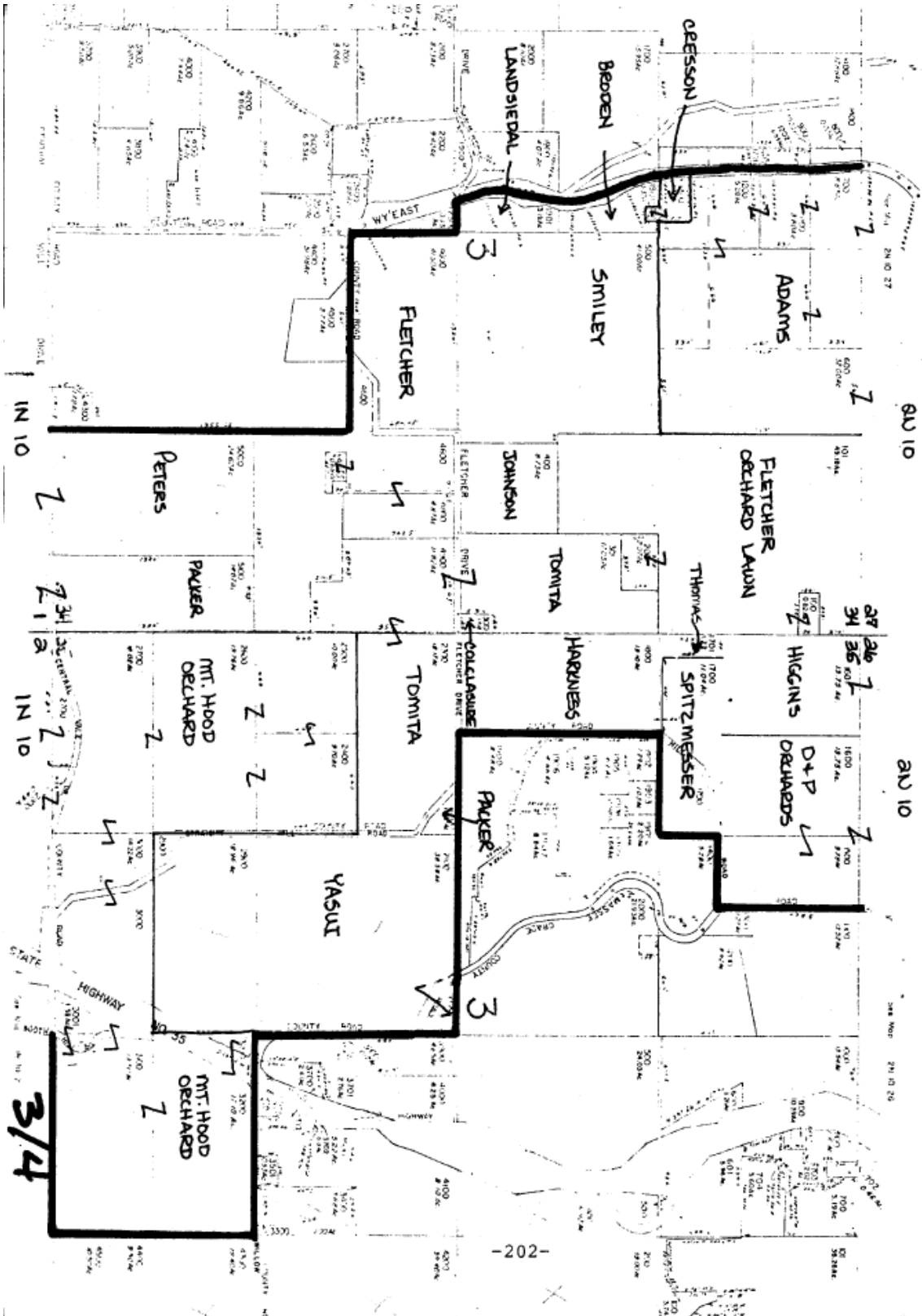




Section 34 T2N R10E WM
Hood River County
Oregon

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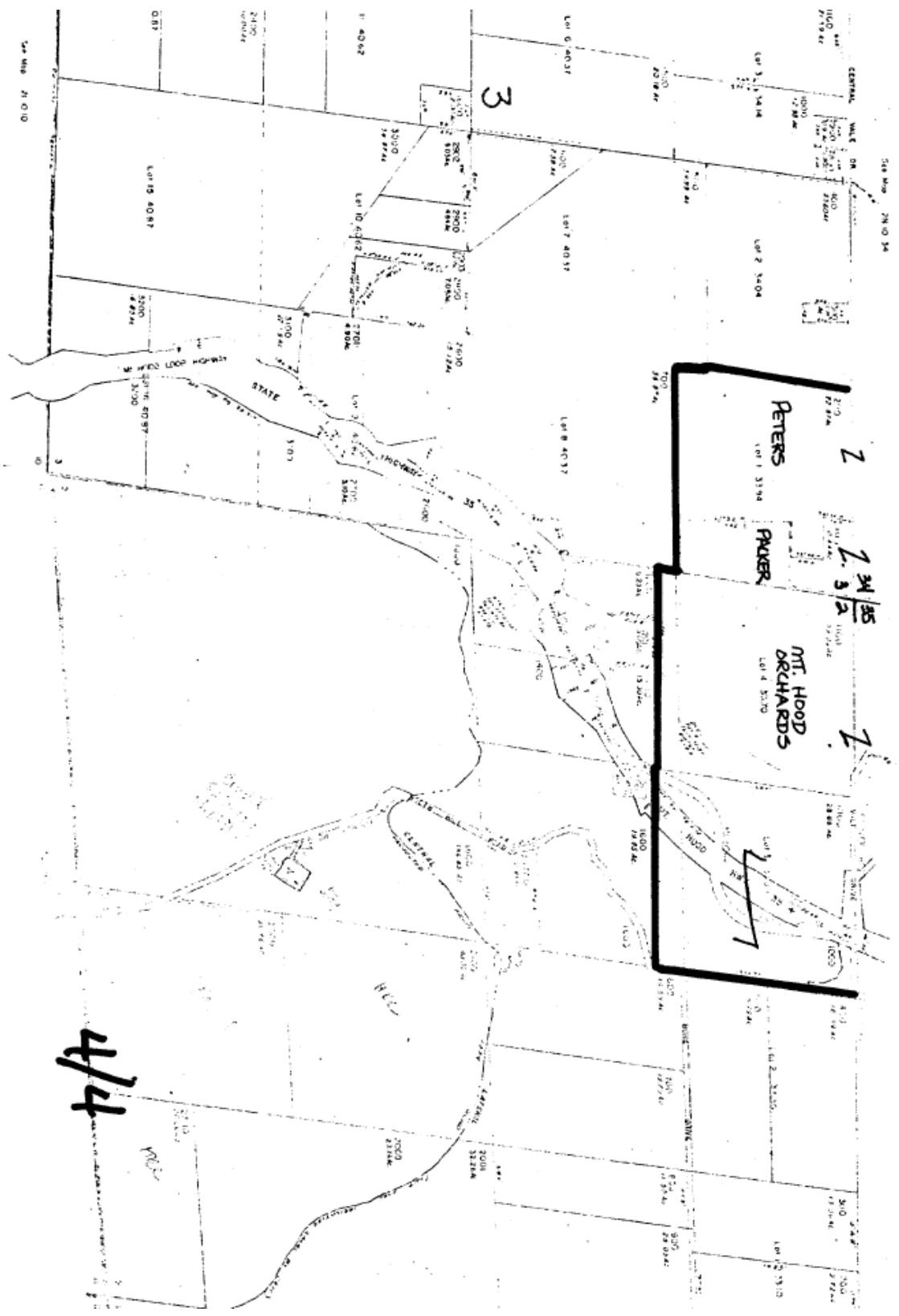
WILLOW FLAT

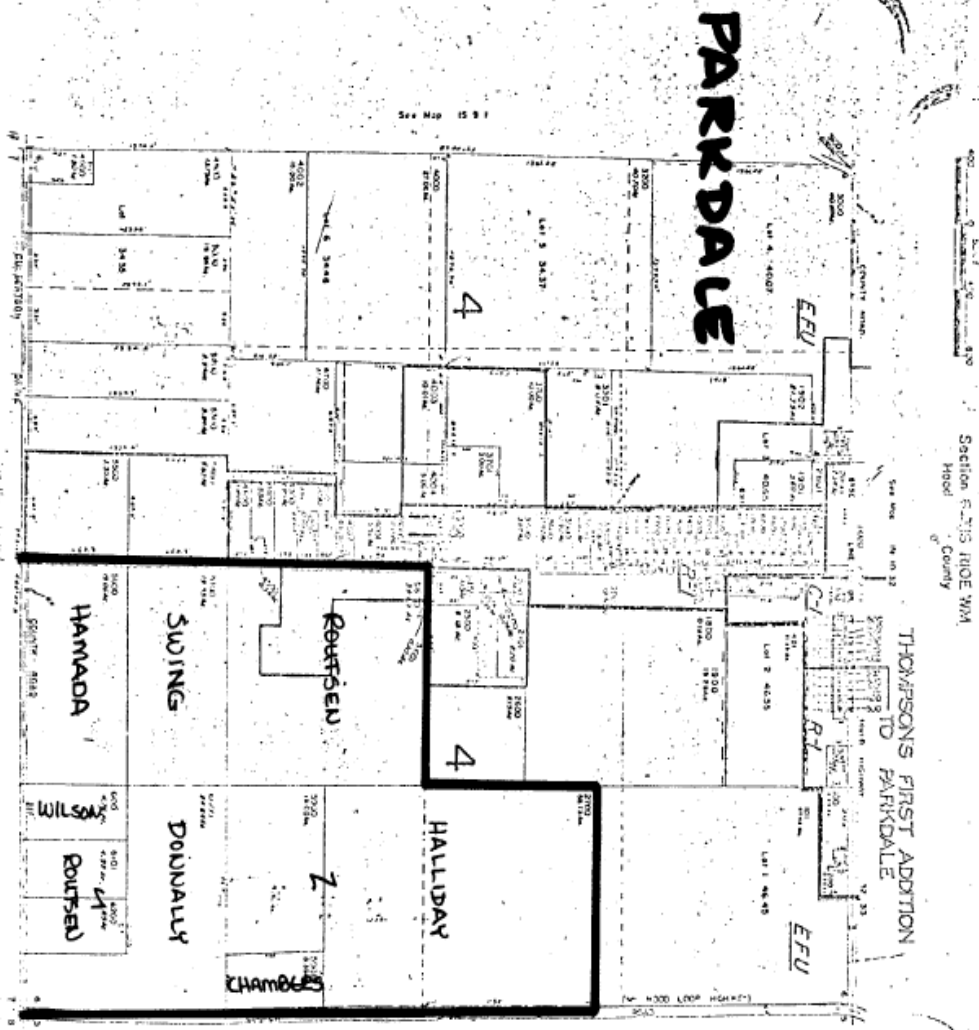


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