

# AGRICULTURAL LANDS

## (GOAL 3)

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# AGRICULTURAL LANDS

## (Goal 3)

### 1. AGRICULTURE IN TILLAMOOK COUNTY

#### 1.1 Overview

Agriculture has played a very prominent role in Tillamook County's economy and way of life since the middle of the last century. Farming produces almost 20 percent of the County's income on only 5 percent (approximately 35,000 acres) of its land.<sup>1</sup> The County's farm sales reached 37.8 million dollars in 1979 - a 200 percent increase over 1971.<sup>2</sup> This increase is still 47 percent when we take inflation into account.

The economic benefits of farming are shared by the entire County, with every dollar in farm sales generating a total of \$2.75 in local economic activity.<sup>3</sup> The County's farmland also provides attractive open space that is enjoyed by residents and visitors alike. This scenic farmland and famous Tillamook Cheese contribute significantly to the County's tourist industry.

The 1978 Census of Agriculture (preliminary report) lists 388 "farms"<sup>4</sup> in Tillamook County with an average size of 108 acres (see Table 1). These farms contain 42,000 acres, almost 10,000 acres of which are in woodland. Two-thirds (261) of these farms are larger than 50 acres, and 225 (58%) are dairies.<sup>5</sup> Farm sales exceeded 20,000 dollars on 196 (51%) of the County's farms. Farming is the principal occupation of 250 (64%) of the owners or occupants of these farms. These figures indicate that approximately 2/3 of the County's farms are full-time commercial operations, most of which are dairies. The remaining third are part-time "hobby" farms.

Agriculture in Tillamook County is a dynamic, growing industry, not only in absolute terms, but also relative to both statewide agriculture and nonfarm economic activities within the County. From 1971 to 1979 total farm sales increased 196 percent for the County and 165 percent for the State as a whole, while dairy sales increased 185 percent for the County and 128 percent for the State (see Table 2). After allowing for inflation, the County's increases during this period were still 47 percent for total farm sales and 41 percent for dairy sales. By comparison the respective deflated statewide figures were only 31 percent and 13 percent.

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<sup>1</sup> Source: "Tillamook Co. Economic Information" June 1979. p. TIL-25, Economic Information Clearinghouse, Oregon Dept. of Economic Development

<sup>2</sup> Source: John Massie, Tillamook County Extension Agent

<sup>3</sup> Source: "Tillamook Co. Economy: A Working Model for Evaluating Change", OSU Extension Service, Special Report 478, March 1977. Stanley Miles, Extension Economist at OSU, explains this so-called multiplier effect in the following way: "As farmers and ranchers go about their business, they generate other economic activity. Agricultural production involves making investments, hiring labor, buying inputs such as fertilizer and fuel, buying machinery and equipment, incurring family and household expenses, etc. Those that farmers buy from also make purchases and generate other business activity. Thus, the original dollar spent by farmers keeps turning over in the economy. The total impact of these dollars being injected into the economy is called Multiplier effect." (In December 15, 1977 report to Ag. Agents)

<sup>4</sup> The Census defines a farm as "any place from which \$1000 or more of agricultural products were sold, or normally would have been sold."

<sup>5</sup> Source: John Massie, Tillamook County Extension Agent

TABLE 1  
SUMMARY OF AGRICULTURAL CHARACTERISTICS – TILLAMOOK COUNTY 1978

Total Acreage (All Uses)	713,600 Acres
Total Acreage in Farms	42,024 Acres (5.9%)
Farmland according to use:	
Cropland and pasture	29,242 Acres (4.2%)
Woodland including woodland pasture	9,699 Acres
Land in house lots, ponds, roads, wetland, etc.	2,383 Acres (.3%)
Land In Farm Zone (EFU)	35,500 Acres
Number of Farms	388
Average Farm Size	108 Acres
Farms by Size:	
Less than 50 acres	127 (32.7%)
50 to 179 acres	194 (50.0%)
180 acres or more	67 (17.3%)
Farms by Value of Sales:	
\$100,000 or more	98 (25.3%)
\$20,000 to \$99,000	98 (25.3%)
\$2,500 to \$19,000	93 (24.0%)
Less than \$2,500	99 (25.5%)
Farms Operated by Owner(s)	374 (96.4%)
Farming as Principal Occupation of Farm Resident	250 (64.4%)

Source: 1978 Census of Agriculture (preliminary report)

From 1970 to 1978 Tillamook County's farm income increased by 224 percent, while the County's nonfarm income increased by only 94 percent (see Table 3). After taking inflation into account, the County's real farm income still increased by 75 percent, while nonfarm income increased by only 5 percent. Even if we look at the longer 1950 to 1978 period, we still see a 110 percent real increase (allowing for inflation) in farm income as compared to a 54 percent real increase in nonfarm income.

Tillamook County is the State's leading dairy county in terms of both milk production and dairy-related income, and it ranks 13th among Oregon's 36 counties in total farm income.<sup>1</sup> Dairy-related agriculture produced 90 percent of the County's farm income in 1979, with 78 percent coming from milk production and the remaining 12 percent from the sale of cattle and calves produced in conjunction with dairy operations (see Table 4). Five percent of the county's farm income came from such specialty products as nursery stock, forest greenery and holly; 2.3 percent came from miscellaneous small farm animals and products (primarily mink), and 2.1 percent came from nondairy-related beef production.<sup>2</sup> Tillamook County's dairy industry benefits from a cool marine climate, a long pasture season, low irrigation requirements in most seasons, a tradition of expert, efficient dairymen and highly successful marketing procedures.

<sup>1</sup> Source: "Oregon 1979 Gross Farm Sales" (preliminary estimates) as compiled by the Extension Economic Information Office, OSU.

<sup>2</sup> Source: John Massie, Tillamook County Extension Agent. For a more detailed discussion of existing and potential types of agriculture in Tillamook County, see "A Citizens Planning Handbook," prepared by Monty Hempel and Paul Levesque, Tillamook County Planning Department, June 1977, p. C-22 to C-27.

TABLE 2  
 GROSS FARM AND DAIRY PRODUCT SALES, TILLAMOOK COUNTY AND STATE COMPARISONS  
 (in thousands of dollars)

	1971	1975	1979
<b>TOTAL FARM SALES</b>			
Tillamook County	12,845 (2.2%)	21,501 (2.0%)	38,030 (2.5%)
Oregon	575,394	1,080,246	1,523,731
<b>DAIRY PRODUCT SALES</b>			
Tillamook County	10,056 (16.5%)	17,200 (19.4%)	28,690 (20.6%)
Oregon	61,050	88,637	138,947

Source: "Tillamook County Economic Information," Oregon Department of Economic Development, June 1979, and "Oregon 1979 Gross Farm Sales," Extension Economic Information Office, Oregon State University, December 21, 1979.

TABLE 3  
 TILLAMOOK COUNTY PERSONAL INCOME  
 FARM AND NONFARM, FOR SELECTED YEARS, 1950 - 78(in thousands of dollars)

YEAR	FARM	NONFARM	TOTAL
1950	3,303 (14.0%)	20,337 (86.0%)	23,640
1959	2,476 (8.6%)	26,398 (93.4%)	28,874
1962	1,775 (5.9%)	28,179 (94.1%)	29,954
1970	4,734 (11.8%)	35,370 (88.2%)	40,104
1974	6,896 (12.9%)	50,335 (88.0%)	57,231
1978	15,325 (18.2%)	68,862 (81.8%)	84,187

Source: "Tillamook County Economic Information," Oregon Department of Economic Development, June 1979.

TABLE 4

## VALUE OF FARM PRODUCTION, TILLAMOOK COUNTY REVENUES (in thousands of dollars)

COMMODITY	1971	1975	1979	1980 (1)
Dairy Products	\$10,056 (78.3%)	\$17,200 (80.0%)	\$27,968 (74.0%)	\$34,654 (80.1%)
Dairy-Related Cattle & Calves (2)	1,604 (12%.5)	2,652 (12.3%)	5,927 (15.7%)	NA (3)
Nondairy-Related Cattle and Calves	456 (3.6%)	435 (2.0%)	849 (2.2%)	NA (3)
Misc. Animals & Products (Primarily Mink)	351 (2.7%)	643 (3.0%)	962 (2.5%)	963 (2.2%)
Specialty Products (4)	87 (0.7%)	400 (1.9%)	1,900 (5.0%)	1,650 (3.8%)
Hay & Forage (5)	21 (0.2%)	97 (0.5%)	74 (0.2%)	124 (0.3%)
All other commodities (6)	<u>270 (2.1%)</u> <sup>7</sup>	<u>74 (0.3%)</u>	<u>107 (0.3%)</u>	<u>130 (0.3%)</u>
TOTAL RECEIPTS	\$12,845 (100%)	\$21,501 (100%)	\$37,787 (100%)	\$43,266

1 Preliminary data.

2 Dairy-related cattle and calves are those produced in conjunction with a dairy operation, including bull calves and cull cows.

3 Estimates for dairy and nondairy cattle and calf sales are not yet available for 1980. Total cattle and calf sales are estimated to be \$5,745,000.

4 this includes nursery stock, forest greenery and holly.

5 The value of hay and forage produced is greatly understated by the fact that most of what is grown is not sold, but is consumed on the farm where it is produced.

6 This includes field, crops, small fruits and berries, vegetable crops, hogs and pigs, sheep and lambs, and chicken eggs.

7 This includes \$224,000 in vegetable sales, which reflects Birds Eye's 1965-72 broccoli venture in Tillamook COUNTY. With the discontinuation of broccoli production, total vegetable sales dropped to \$5,000 by 1973. By 1979 total vegetable sales had risen to only \$20,000, still less than 10 percent of 1971 sales.

SOURCE: John Massie Tillamook COUNTY Extension Agent.

The Tillamook County Creamery Association (TCCA), a producer-owned cooperative, has played a key role in the development of the County's dairy industry for the past 60 years. TCCA had gross sales of over 46 million dollars in 1979-- a 200 percent increase over 1970. Payments to milk producers within the County reached 24 ½ million dollars in 1979--also a 200 percent increase over 1970. These increases are still as high as 40 percent when inflation is taken into account. The estimated 1980 return to the County's dairymen is 29.3 million dollars - a 20 percent increase over 1979. TCCA is one of the County's largest employers, with over 200 employees and a 1980 payroll of approximately \$4,000,000.<sup>1</sup>

The Creamery Association produced 23.5 million pounds of natural cheddar cheese in 1979-- approximately 80 percent of Oregon's total production. In 1979, TCCA received 197 million pounds of locally produced milk, and an additional 83 million pounds from producers outside

<sup>1</sup> The source of all TCCA data is Pete Sutton, General Manager of the Association.

of the County. At the same time 39 million pounds of locally produced milk was being shipped to processors outside of the County. TCCA's capacity is such that during peak production periods during the year, it receives and processes up to 30 percent of the milk produced in Oregon. The Creamery still has excess capacity which would permit the processing of an increased supply of locally produced milk.

## 1.2 Agricultural Lands Inventory

Tillamook County has a limited amount of land that is suited for agricultural production. The more recent comprehensive agricultural soil survey--which occurred in 1957-- identified 48,218 acres of SCS Class I-IV soils, 36,472 acres of which were in agricultural use (see Table 5).<sup>1</sup> These are the soils that should be retained for agricultural use according to the state agricultural lands goal. An additional 3,959 acres of SCS Class IV-VIII soils were also being used for agricultural purposes. 8,967 acres of Class I-IV soils were in forest use in 1957, while 2,230 were in urban use. Since then approximately 1,500 additional acres of these soils have been committed to nonfarm development.

TABLE 5  
AGRICULTURAL SOILS, ACREAGE BY CLASS AND USE

	<b>Cropland</b>	<b>Pasture</b>	<b>Forest</b>	<b>Urban</b>	<b>Other</b>	<b>Total</b>
Class I	0	0	0	0	0	0
Class II	18,767	908	1,624	1,194	5	22,498
Class III	6,058	857	2,484	236	2	9,637
Class IV	<u>6,683</u>	<u>3,199</u>	<u>4,859</u>	<u>800</u>	<u>542</u>	<u>16,144</u>
TOTAL	31,508	4,964	8,967	2,230	549	48,218

## 1.3 The Need to Protect Farmland

The quality and reputation of Tillamook County's dairy products assures that there will be a market for all the milk and cheese that can be produced in the County in the foreseeable future. What can actually be produced depends upon the amount of land that remains available for farming. There have been growing pressures to convert the County's productive farmlands to other uses. The best agricultural land is physically attractive, is relatively flat, exhibits good drainage, and has an available water supply. Such land is also easiest to develop for housing and other urban uses.

The sale of productive farmland to nonfarmers leads to its irreversible transfer to nonfarm uses. An extension of this trend in Tillamook County could lead to the transformation of the County's dairy industry into a second-home and retirement community. The long-term production and economic returns from the County's farmlands would be replaced by the short-term profitability of selling land and building houses.

Nonfarm development not only takes farmland out of production, it can also lead to restrictions on farm practices on nearby land. Farming can be adversely affected by noise and human and animal trespass from nearby nonfarm development. Many accepted and customary farming practices are not compatible with residential or other nonfarm uses on

<sup>1</sup> Soils Survey of Tillamook Areas, Oregon, pp. 39 and 75. This survey contains soil maps of the County's agricultural lands. In addition, the County Planning Department has color-coded maps which describe the County's agricultural soils according to capability class (I-VIII) and the five groups that are identified in Tillamook County's Soil Suitability Rating System (see appendix D).

nearby lands. Conflict between farm and nonfarm uses can lead to restrictions on such necessary farm practices as the spreading of animal manure and the use of herbicides and pesticides. Opposition to these farm practices is likely to increase in the future as more people who were raised in an urban environment move to Tillamook County. Nonfarm development can thereby affect an area much larger than the acreage upon which the development occurs. The intrusion of nonfarm development into a farm area can ultimately remove the entire areas from agricultural production as adjacent farmers, tired of conflicts with their nonfarm neighbors, are induced to irreversibly convert their land to other uses.

The National Association of Counties Agricultural Lands Study has examined the wide range of conflicts that arise as nonfarm residential development invades agricultural areas.<sup>1</sup> This study concludes that these conflicts:

“...are the unmistakable signal that local agriculture is in trouble, that a traditional way of life--and making a decent living--is threatened...realistically speaking, the only way to avoid threatening land use conflicts is not for farmers to change the way they use their land--because odors and noise are an integral part of agriculture--but rather to change the way in which communities are developed. Ideally, they should be developed so that residences, agriculture, and other industries all have their place and are insulated from one another.”

The study points out that the farmer is becoming the “underdog” - he is becoming scarcer all the time - in part because land use conflicts are leading to the demise of local agriculture. “And that means that, when new land use conflicts arise, the community as a whole--composed more and more of people who do not understand agriculture--is less sympathetic to the farmer's point of view.” The booklet concludes that “unless something is done at the local level to guide community growth and development, so that residential development is kept at a respectable distance from the farming industry, the future of agriculture in any localities around the nation looks gloomy.”

## 2. LEGISLATIVE MANDATE

### 2.1 Overview

The loss of agricultural land served as a primary impetus for the State Legislature's establishment of Oregon's land use planning program with the passage of Senate Bill 100 in 1973. The Legislature has specifically adopted four key elements which address the protection of farmland: (1) their Agricultural Lands Policy statement; (2) the Statewide Agricultural Lands Planning Goal; (3) the provisions governing exclusive farm use (EFU) zones; and (4) preferential tax treatment for agricultural land.

### 2.2 Agricultural Lands Policy

The Legislature's 1973 Agricultural Lands Policy (ORS 215.243) made the following points:

- (1) Open land for agricultural use... constitute(s) an important physical, social, aesthetic and economic asset to all of the people of this state.
- (2) The preservation of a maximum amount of the limited supply of agricultural land...in large blocks is necessary in maintaining the agricultural economy of the state and for

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<sup>1</sup> Edward Thompson, Jr., “Farming in the Shadow of Suburbia: Case studies in Agricultural Land Use conflicts,” National Association of Counties Research Foundation, Washington, D.C., December, 1980.



the assurance of adequate, healthful and nutritious food for the people of this state and nation.

- (3) Expansion of urban development into rural areas is a matter of public concern because of the (resultant) unnecessary increases in costs of community services, (and) conflicts between farm and urban activities.
- (4) Exclusive farm use zoning as provided by law, substantially limits alternatives to the use of rural land and, with the importance of rural lands to the public, justifies incentives and privileges offered to encourage owners of rural lands to hold such lands in exclusive farm use zones.

### 2.3 Agricultural Lands Planning Goal

The Agricultural Goal is one of the most specific of the 19 Statewide Planning Goals, reflecting the concern for the protection of farmland that prompted the legislatures adoption of the state land use planning law (ORS Chapter 197).

The goal states that “Agricultural lands shall be preserved and maintained for farm use, consistent with existing and future needs for agricultural products, forest and open space. These lands shall be inventoried and preserved by adopting exclusive farm use zones pursuant to ORS Chapter 215.”

Farmland that is to be included in such farm use zones in western Oregon includes:

“land up predominantly class I, II, III and IV soils...., 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 ram 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 as agricultural land in any event.”

Minimum lot sizes that are utilized for farm uses are to be “appropriate for the continuation of the existing commercial agricultural enterprise within the area.” (The County’s minimum lot size requirements are discussed in Section 5.2 below).

The exclusion of rural agricultural land from the farm use zone requires a Goal 2 “exception” to the agricultural lands goal. Such as exception must provide “compelling reasons and facts” for the exclusion, including:

- (a) Why these other uses should be provided for;
- (b) What alternative locations within the area could be used for the proposed uses;
- (c) What are the long term environmental, economic, social and energy consequences to the locality, the region or the state from not applying the goal or permitting the alternative uses;
- (d) A finding that the proposed uses will be compatible with other adjacent uses.

### 2.4 The Exclusive Farm Use Zone

The exclusive farm use zone (EFU) was created by the State Legislative to provide areas

where farming can take place free of interference and to help local assessors decide which land qualifies for farm tax assessment. This zone is the implementation method for the preservation of agricultural lands that are identified in the County's comprehensive plan.

The legislature has defined farm use (ORS 215.203), and specifically enumerated all nonfarm uses that a county can include in an EFU zone (ORS 215.213). The inclusion of any other uses can disqualify all land within that zone from receiving an automatic assessment at its farm use value (ORS 308.343). Tillamook County's EFU zone includes all of the uses that are permitted by state law (see Section 4.1 below).

## 2.5 Farm Tax Assessment

Oregon is one of a majority of states that assesses farmland at its farm value as opposed to the higher value that it might have if it were converted to nonfarm development. The legislature's expressed intent is that bona fide farm properties "shall be assessed at a value that is exclusive of values attributable to urban influences or speculative purchase." (ORS 308.345) The legislature has specified that "any land which is within a farm use zone..., and which is used exclusively for farm use as defined in subsection(2) or ORS 215.203, shall be assessed at its true cash value for farm use and not at the true cash value it would have if applied to other than farm use." [ORS 308.370 (1)] The farm use value assessment ranges from, 40 to 50 percent of the nonfarm use assessment. The legislature has also exempted land in the farm zone from certain special district assessments, including those for sewer and water (ORS 308.401).

The legislature currently permits a farm use assessment for land that is not within an exclusive farm use zone if certain minimum income requirements are met to assure that the land is being used exclusively for farming [ORS 308.370 (2) and ORS 308.372].

## 3. TILLAMOOK COUNTY'S AGRICULTURAL LANDS PLANNING PROCESS

### 3.1 Overview

Agricultural lands planning on compliance with state law (ORS 197) was initiated by the Tillamook Soil and Water Conservation District Board in the Spring of 1978 with an attempt to develop criteria for evaluating the County's agricultural lands. The County's comprehensive team began to address agricultural lands planning in September, 1978 with the addition of a Natural Resources Planner who was assigned responsibility for the agricultural and forestry elements of the County's comprehensive plan.

The County's efforts focused on the development of the agricultural lands criteria until these were adopted by the Board of County commissioners on July 27, 1979. This was followed by a campaign to bring land into the County's farm zone on a voluntary basis during the Fall of 1979 and early in 1980, which increased the acreage in the farm zone from 13,000 to 25,000 acres. The identification and zoning of agricultural lands were completed from March to October of 1980 with the development and approval of zoning proposals for all of the land in the County. This brought another 10,500 acres into the farm zone, bringing the total to 35,500 acres. The final step in the agricultural lands planning process was the composition of the Agricultural Lands Element, including the drafting and approval of Agricultural Findings and Policies that reflect what has been learned during the past two years about the County's agricultural resources and needs. The exceptions that have been taken to the Agricultural Lands Goal are included in the County's "justification" document.

### 3.2 Agricultural Lands Criteria

Tillamook County's "Criteria for Evaluating Agricultural Lands" was adopted unanimously by the County's Board of Commissioners on July 27 after two public hearings. This action concluded a year-long process of technical assistance and public review that involved the Tillamook Soil and Water Conservation District Board, the U.S. Soil Conservation Service, the Oregon State Agricultural Extension Service, the Tillamook Farm Bureau, the County's five Citizen Advisory Committees, the County Planning Commission and the comprehensive planning team. This process is described in Appendix A.

The County Board of Commissioners' July 27 action included not only the adoption of the agricultural lands criteria (Appendix C), but also the approval of the supplementary "Soil Suitability Rating for Tillamook County's Land Use Plan," (Appendix D) and a resolution which describes the use of the criteria and identified other factors that can be taken into account when decisions are made that affect agricultural lands (Appendix B).

The resolution explicitly recognizes the need to preserve agricultural land consistent with local needs and state law. It stipulates that the criteria and soil suitability rating system will be used prior to the adoption of the County's updated comprehensive plan "in a determination of the agricultural suitability of land that is involved in a land use decision or action," and that they "will be further used in the actual updating of the comprehensive plan to identify SCS Class I-IV soils and other agricultural and related lands that upon the owner's request could be excluded from the County's farm zone."

The four criteria that are used to determine the agricultural suitability of any given ownership are (1) soil suitability, (2) subject's parcel size, (3) surrounding parcel size, and (4) compatibility of surrounding land use (see Appendix C). Any contiguous farm ownership can be rated with a numerical value that is determined by standards that have been set for each criteria. A weighting system which reflects the relative importance of each criteria is used to aggregate these numerical values on a 100-point scale for any particular ownership. For example, an ownership can receive up to 52 points for soil suitability, 16 points for subject's parcel size, 8 points for surrounding parcel size, and 24 points for compatibility of surrounding land use.

Soil suitability is determined by the soil suitability rating system (Appendix D). Each of the County's agricultural soils are initially rated according to their natural ability to produce agricultural goods without managerial inputs. Soils are divided into five agricultural potential groups according to their texture, slope, depth, natural drainage, and available water holding capacity. Each of these groups receives a numerical value which is then modified to take into account artificial drainage, the availability of irrigation water and whether or not the ownership is within the 100-year floodplain.

The County's soil suitability rating system is designed to supplement the Soil Conservation Service's land capability classification system by providing more specific information on the agricultural productivity of local soils. The County's system was reviewed and approved by the Soil Conservation Service's State Soil Scientist (see Appendix E).

The agricultural lands criteria have subsequently received national recognition, for which the Board of County Commissioners received a congratulatory letter from Governor Vic Atiyeh (see Appendix F).

### 3.3 Voluntary EFU Campaign

A campaign for the voluntary inclusion of land in the County's farm zone was conducted by the planning team during November and December of 1979. This campaign was sponsored by the Tillamook County Soil and Water Conservation District Board and had the official

support of the Tillamook County Farm Bureau, the Tillamook County Creamery Association, and the County Pomona Grange. This effort provided an opportunity to inform people about the need to protect farmland and the advantage of the farm zone.

The campaign focused on the 325 owners of approximately 19,000 acres that were receiving a farm tax but were not included in the County's farm zone. (Less than 13,000 acres were already in the farm zone.) Each of these owners received a letter from the Chairman of the Tillamook County Soil and Water Conservation District which stressed the need to protect farmland and the advantages of the farm zone. An application to bring land into the farm zone was enclosed along with specific information on the acreage and tax lot numbers of parcels that were currently receiving the farm tax but were not in the farm zone.

An extensive public information effort occurred at the time of these mailings. The local radio station (KTIL) provided free air space for statements by members of the County's Soil and Water Conservation District Board, Farm Bureau and Creamery Association which encouraged people to bring their land into the farm zone. Informative articles appeared in the County-wide newspaper, the "Headlight Herald" (Appendix G).

By January 1980, applications had been received to bring over 12,000 acres into the farm zone as a result of the campaign. This included 336 parcels in 144 ownerships. Their approval by the County Planning Commission on February 28, and the Board of County Commissioners on April 11, increased the total acreage in the County's farm zone to 25,000 acres, which was approximately 75 percent of what staff estimated should eventually be included in the farm zone.

#### 3.4 Completion of Rezoning

The rezoning of the remainder of the County's lands was accomplished during the period from March to October of 1980. Agricultural land which had not come into the farm zone by the end of the voluntary EFU campaign was evaluated to determine which additional parcels should be included in the farm zone. The agricultural lands criteria were used to make this determination.

Every possible effort was made to develop zoning proposals that were consistent with land owners' preferences while still being within the bounds established by local criteria and state law. Agreement was reached with over 98 percent of the affected land owners.

The County's five Citizen Advisory Committees (CACs) reviewed all zoning proposals for their area. This required from three to six special four-hour meetings in each CAC area. The CACs gave very careful consideration to those cases where there was a known disagreement between staff proposals and the preferences of individual property owners. The property owners were usually present to argue their case which was decided with a public vote by the CAC. Staff changed their recommendation in response to a contrary vote by a CAC in all but a few disagreements that occurred in the South County area.

After CAC review and approval, the zoning proposals were brought before the County Planning Commission who focused on disputed proposals within each CAC area. The Commission received a staff report and then heard testimony from CAC members and affected or interested property owners. Disputes were carried on to the Board of County Commissioners only if the Planning Commission supported the staff position in opposition to the affected property owners.

The Board of County Commissioners concluded their public hearings on zoning proposals in October 1980 with the inclusion of an additional 10,500 acres in the County's farm zone. This

brought the total acreage in this zone to 35,500 acres. An additional 2,000 acres was brought into the County's Small Farm and Woodlot 20-Acre zone which also qualifies as an EFU zone. Approximately 600 of these acres are farmland, with the remainder being forest land.

### 3.5 Agricultural Findings and Policies

The agricultural findings and policies which were written at the conclusion of the agricultural planning effort reflect the preceding two years of discussions at CAC meetings and with agricultural people throughout the County. Many of the findings and policies area based on the Tillamook Soil and Water Conservation District's Natural Resource Conservation Program. The SWCD Board reviewed all policies as did other interested members of the agricultural community, including the ASCS Committee, the County Extension Agent, the Soil Conservation Service's District Conservationist, and the president of the Tillamook Farm Bureau.

These findings and policies were reviewed by the County's five Citizen Advisory Committees between April and August of 1981. This review led to a number of constructive changes and eventual formal approval by each CAC by a cumulative 34-2 vote.<sup>1</sup>

## 4. AGRICULTURAL FINDINGS AND POLICIES

### 4.1 Agricultural Land Zoning

#### Findings

Zoning regulations are one means that is available to the County to protect farmland while assuring that an adequate supply of buildable land is available for nonfarm development. The County's commercial agricultural land has been placed in the Farm Zone (F-1) and the Small Farm Woodlot 20-Acres Zone (SFW-20). These zones are based on local resources and needs as well as being in compliance with the state laws exclusive farm use requirements (ORS 215.213). The inclusion of over 35,000 acres in the F-1 Zone and 2,000 acres in the SFW-20 Zone will help assure that the County's agricultural sector can continue to grow and contribute to the economic well being of the entire County.

The objectives of these zones would be undermined if parcels are created and sold that are too small to support the continuation of the existing commercial agricultural enterprise within the area. Dairying is the predominant type of agriculture in Tillamook County, with over 90 percent of the County's gross farm sales coming from dairy-related agriculture in 1979. The Tillamook County Soil and Water Conservation District and the County's citizen advisory committees have concluded that 40 or more acres are normally required for a viable dairy farm, and that a 40-acre minimum lot size requirement in the County's F-1 Zone will help protect agricultural land from conversion to nonfarm use.

The F-1 Zone does allow the creation of parcels smaller than 40 acres if approved by the County Planning Commission according to conditions described in subsection 3.002(5) of the County's zoning ordinance, while the SFW-20 Zone allows parcels smaller than 20 acres under the same conditions. This takes into account the fact that parcels smaller than 40 acres can be used for dairy farming if such use is in conjunction with other farmland in the area. And it permits the establishment of alternative commercial farm uses of greater

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<sup>1</sup> The vote and date of each CAC's approval is as follows: North; 5-0 (6/29/81), North Central; 6-0 (7/15/81, Central; 9-1 (8/5/81), South Central; 8-0 (6/23/81), South; 6-1 (6/30/81)

intensity (such as a nursery) than commercial firms in the area. However, it must be recognized that some legitimate intensive farm uses such as rabbit or poultry farms need not be located on the County's more productive lands. Nor are the F-1 Zone or the SFW-20 Zone appropriate locations for so-called "hobby farms" whose owner's primary vocation is other than commercial agriculture. These uses can best be accommodated in the County's Small Farm and Woodlot 10-Acre Zone which is designed for small-scale agriculture and forest uses.

The County's F-1 Zone currently contains many parcels smaller than 40 acres. Many of these parcels will be used in conjunction with other farmland in the area as they are not by themselves large enough to support the continuation of existing commercial agriculture. The placement of dwellings on many of these parcels would contribute to the conversion of productive land to nonfarm uses. The County's F-1 Zone does permit the placement of dwellings on ownerships smaller than 40 acres if they meet conditions described in subsection 3.002 (3) (n) of the zoning ordinance. The SFW-20 Zone allows parcels smaller than 20 acres according to the same conditions. These conditions are designed to assure that such dwelling will be used in conjunction with commercial agricultural enterprise in the area.

Nonfarm development is also permissible in the F-1 Zone and the SFW-20 Zone if it does not utilize productive farmland and if it does not interfere with farm practices on adjacent or nearby land. These zones conditionally permit all nonfarm uses that are allowed under state law.

#### Policy

Tillamook County will maintain its F-1 and SFW-20 Zones to protect farmland and farm practices from the unnecessary encroachment of nonfarm development. The County's Agricultural Lands Criteria will be used to establish priorities for the availability of farmland for conversion to nonfarm uses. Land will not be removed from the farm zones without appropriate consideration of need, consequences, alternatives and compatibility. Minimum lot size requirements will be enforced to help protect agricultural land from conversion to nonfarm use. The creation of parcels smaller than the prescribed minimum and/or the placement of dwellings on such parcels shall be permitted if approved by the County Planning Commission according to the criteria required by state law and following the procedures prescribed in the County's zoning ordinance.

#### 4.2 Agricultural Advisory Committee

##### Findings

The Tillamook Soil and Water Conservation District (SWCD) Board has served as the County's Agricultural Advisory Committee for the past 3 years during the revision of the County's Comprehensive Plan. They have had an essential role in the Agricultural planning process, reviewing every product to assure consistency with local resources and needs as well as compliance with State law.

This relationship was anticipated by a Memorandum of Understanding that the District entered into with the Tillamook Board of County Commissioners on April 19, 1978. This memorandum recognizes that "the District has been duly established under the authority of ORS 568.210 to 568.800 with responsibility for establishing and administering programs for planning and management of renewable resources lying within its jurisdictional boundaries..." The County agreed to:

- (1) “Recognize the District’s Natural Resources Conservation Program as official input to the comprehensive planning process,
- (2) Recognize the District’s Annual Work Program as the implementing mechanism for appropriate Natural Resource Conservation Program objectives and policies which have been included in the comprehensive plan,
- (3) Recognize the District as the local leader in matters pertaining to the planning and management of renewable natural resources.”

The SWCD’s Natural Resource Conservation Program objectives and policies have been incorporated into the County Comprehensive Plan’s Agricultural Findings and Policies with additions that have been approved by the District Board. Moreover, the District played an essential role in the development of the County’s Agricultural Lands Criteria and in the County’s successful campaign to bring land into the Exclusive Farm Use Zone on a voluntary basis.

The SWCD can continue to assist the County by providing technical advice on all aspects of the County’s agricultural planning process, consistent with their Memorandum of Understanding with the Board of County Commissioners. The SWCD’s Annual Work Program can serve as an implementing mechanism for many of the agricultural policies that are adopted as part of the comprehensive plan. The District can make recommendations on agriculturally-related land use actions that come before the County Planning Commission, and they can conduct a quarterly review of important agricultural-related decisions that have been made by the County’s Planning Department, Planning Commission, and Board of Commissioners. This review would provide a perspective on the cumulative effect of these decisions on the protection of the County’s productive agricultural lands.

#### Policy

Tillamook County recognizes the essential contributions of the Tillamook Soil and Water Conservation District Board to the County’s agricultural lands planning process and supports the continued involvement of the District in all aspects of Agricultural lands planning. This includes technical advice, policy implementation recommendations on land use actions, and a quarterly review of important agriculturally related decisions made by the County Planning Department, Planning Commission, and Board of Commissioners.

### 4.3 Technical and Financial Assistance

#### Findings

The Oregon State University Extension Service, and the USDA’s Soil conservation Service, Agricultural Stabilization and Conservation Service, and Farmers Home Administration have local offices which provide technical and financial services for agricultural producers in Tillamook County.

The Extension Service, with its local Extension Agent, provides information, education and technical support to local agricultural organizations and individual producers. This service literally extends many of Oregon State University’s educational and technical resources into the local community. The Extension Agent serves as an advisor to the Tillamook County Soil and Water Conservation District and has provided technical assistance in the development of the Agricultural Element of the County’s comprehensive plan, including the Agricultural Lands Criteria.

The Soil Conservation Service (SCS) has a cooperative working arrangement with the locally-elected Tillamook County Soil and Water Conservation District (SWCD) which includes assistance in the development and implementation of the SWCD's Natural Resource Conservation Plan. SCS provides direct technical assistance to individuals and groups of landowners or units of government with direction from the SWCD. This assistance that SCS provided in the development of the County's Agricultural Lands Criteria is described in Exhibit A. The SWCD's authority and role in the County's agricultural lands planning process is described in Section 3 and subsection 4.2.

In addition, SCS has administrative responsibility for the following project-type activities: 1) River Basin Surveys such as the USDA "Tillamook Bay Drainage Basin Sediment and Erosion Study;" 2) The Small Watershed Program which provides financial assistance for the protection and beneficial use of water resources in the County's watersheds; 3) The Watershed Emergency Operation Program which provides financial support for the rehabilitation of watersheds damaged by natural disasters such as flooding and fire; and 4) the Resource Conservation and Development Program which has broad application to the orderly development of rural and urban areas, consistent with the protection and enhancement of natural resources.

SCS also provides technical assistance for the following cost-share programs and projects administered by the Agricultural Stabilization and Conservation Service (ASCS): 1) The Agricultural conservation Program (ACP) which provides financial support for the protection and enhancement of soil and water resources; 2) The Emergency Conservation Program which provides financial support for the rehabilitation of farm land damaged by erosion, floods and other natural disasters; and 3) Rural Clean Water Projects. ASCS has a current application in for a Rural Clean Water Project, which, if approved, would make an additional two million dollars available to farmers in the Tillamook Bay Drainage Basin for ACP-type projects.

ASCS also administers the Forestry Incentive Program (FIP) which provides financial assistance to private landowners for tree planting and timber stand improvement. The Oregon State Department of Forestry provides technical assistance for FIP through their service forestry program.

A county ASCS Committee provides overall direction for ASCS-administered programs and projects, and approves individual applications for financial assistance. This Committee is made up of three agricultural producers who are elected by the County's farmers. These programs are administered by ASCS's County Executive Director.

The ASCS Committee and the SWCD work closely together in their common effort to bring about the conservation, development and wise use of land, water and related resources. ASCS and SCS staffs have a similar relationship which is facilitated by their sharing an office in Tillamook.

The Farmers Home Administration (FmHA) channels credit to farmers, rural residents and communities, while providing counseling and technical assistance to borrowers. FmHA programs which preserve and enhance agricultural resources and promote agricultural enterprise include loans for farm ownerships, operations and emergencies, along with loans for irrigation and drainage, grazing watersheds, soil and water conservation and resource conservation and development.

Some other FmHA programs have been criticized for contributing to the conversion of productive farmland to nonfarm uses. This includes loans for financing nonfarm dwellings and sewer and water systems outside of established communities in agricultural areas.



These loans can promote a degree of nonfarm development on agricultural land that would not otherwise be possible.<sup>1</sup>

#### Policy

The County recognizes and encourages the financial and technical service provided by the Oregon State Extension Service and the USDA's Soil Conservation Service, Agricultural Stabilization and Conservation Service and Farmers Home Administration which preserve and enhance agricultural resources and promote agricultural enterprise. The County particularly supports and encourages those programs which require local initiative and direction.

### 4.4 Farm Taxation

#### Findings

Oregon is one of a majority of states which has adopted a farm use value taxation program whereby farmland is assessed for its value in farm use and not at any higher value it might have if it were converted to a nonfarm use. The legislature recognized that farmers can be financially compelled to convert their land to nonfarm uses when it is taxed at its full development value. The acreage requirements of farming are such that farmers cannot afford to pay the same per acre tax rate as can the owners of nonfarm businesses or homesites that require substantially less acreage.

The legislature has specifically provided that "Any land which is within a farm use zone... and which is used exclusively for farm use as defined in subsection (2) of ORS 245.203, shall be assessed at its true cash value for farm use" [ORS 308.370 (1)]. The legislature has also exempted land in the farm zone from certain special district assessments, including those for sewer and water (ORS 308.401).

The reduced farm tax rate for land in the farm zone is reasonable and equitable as farmers still pay their own way when it comes to taxes. Even with the lower farm rate, the tax returns to the community from farms are generally greater than required public service and facility outlays to service farms. An 80-acre farm does not require as much public expenditures for school services, fire protection, road maintenance, and utility services as does 80 acres of more dense nonfarm development. Moreover, substantial public benefits are derived from the incentive that the lower farm tax rate provides for keeping land in farm use as this helps assure an adequate and affordable food supply in the future.

The inclusion of a little more than 35,000 acres in the Farm Zone should not lead to significant increases in the property taxes paid by nonfarmers in the County. In 1979, prior to the current rezoning of the County's land, the County Assessor had already certified over 32,000 acres as qualified by state law of the farm tax rate. Less than 13,000 acres were in the farm zone at that time. The approximately 3,500 acres that has not been receiving the farm tax, but which are not included in the farm zone are made up primarily of woodland which qualifies for a forest tax or is farm land that already qualified for the farm tax but whose owner had not filed the necessary application with the County Assessor.

One questionable feature of current State law is the provision for a farm use tax assessment for land that is not within a farm zone [ORS 308.370 (2)] if certain minimum farm income

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<sup>1</sup> See, for example, the Comptroller General's Report to the Congress, Preserving America's Farmland - A goal the Federal Government Should Support", September 20, 1979, pp 39-40.

requirements are satisfied to assure that the land is currently being used for agricultural purposes. The owners of such land have not made the same long-term commitment to continued agricultural production as have those whose land is included in the farm zone, and consequently are not providing the same public benefits.

A recent congressional report indicates that farm value assessment for land not in an exclusive farm use zone tends to encourage speculation without actually protecting farmland.<sup>1</sup> This report concludes with the recommendation that “States and localities that offer preferential farmland assessments should insist that... tax advantages apply only to acreages where exclusive farmland zoning or other legally binding covenants will keep the land in agricultural use.”

#### Policy

Tillamook County, recognizing the public benefits that are derived from a long-term commitment of productive land to farm use, supports continued farm use value taxation for land that is included in the exclusive farm use zone. The County requests that the state legislature repeal the State law which permits a farm use assessment for land that is not in an exclusive farm use zone. The owners of such land have not made the same long-term commitment to continued agricultural production as have those whose land is in exclusive farm use, and consequently are not providing the same public benefits. However, land that is removed from the exclusive farm use zone following an action by the governing body that was not requested or initiated by the owner should continue to be eligible for farm use assessment until the owner actually stops farming and converts the land to a nonfarm use.

### 4.5 Protection of Farm Practices

#### Findings

Tillamook County’s relatively narrow valleys and existing development patterns make it impossible to isolate farmland from nonfarm development. Even in areas where most of the land is committed to agriculture, farmers may still be outnumbered by nonfarm neighbors who may object to such farm practices as the spreading of animal manure or the use of herbicides. Such objections can take the form of nuisance lawsuits resulting in financial liability for the farmer or the suspension of agricultural operations. Opposition to various farm practices is likely to increase in the future as more people who were raised in an urban environment move to Tillamook County.

Oregon State law currently prohibits the enactment of local ordinances that “would unreasonably restrict or regulate farm structures or... accepted farm practices because of noise, dust, odor or other materials carried in the air or other conditions arising therefrom is such conditions do not extend beyond the boundaries for the exclusive farm zone within which they are created in such manner as to interfere with the use of adjacent lands.” (ORS 215.213)

This law provides limited protection for farmers in the farm zone as the question of what constitutes any “reasonable” restriction or regulation and what constitutes “accepted” farm practices are still subject to litigation and legal interpretation. Moreover, farmers are NOT protected by state law when the effects of their practices extend beyond the boundaries of the exclusive farm use zone. This is a particular problem for farmers in areas where

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<sup>1</sup> US House of Representatives Committee on Banking, Finance, and Urban Affairs, “Compact Cities: Energy Saving Strategies for the 80’s.” 7/80

commitments to nonfarm development have caused the County to intersperse nonfarm zoning with exclusive farm use zoning. This concession to nonfarm development in predominantly farm areas could lead to significant restrictions on farm practices without further recognition of the right of farmers to continue the reasonable and customary farm practices that are required to maintain a profitable farm enterprise.

So called "right to farm" laws, which are designed to protect farmers from nuisance law suits, provide only limited protection no matter how well these laws are worded. In a comprehensive review of this approach in the November-December 1980 issue of the *Aglands Exchange*, the Director of the National Association of Counties Research Foundation's "Agriculture Lands Project" concludes that "right to farm" laws are of questionable value as a means of protecting the farmer from nuisance suits that result from land use conflicts that, in turn, stem from the encroachment of residential development into agricultural areas. This review further concludes that:

"The most that can be said for the 'right to farm' laws... is that they offer just a bit more protection to the farmer than does the common law of nuisance. The worst that can be said about the 'right to farm' laws is that, if indeed they are constitutional, they hold out to farmers a false promise of security that cannot be fulfilled. In this sense, they are a poor substitute for the one method of protecting agriculture from land use conflicts that offers real hope for its future security...discouraging residential development of agricultural areas in the first place."

The most effective and equitable way to avoid land use conflicts that may lead to restrictions on farm practices is not for farmers to change the way they use their land because odors and noise are an integral part of agriculture - but rather to utilize appropriate zoning to separate agricultural uses from nonfarm development as much as possible, given topography and existing land use patterns.

#### Policy

Tillamook County recognizes that many customary farm practices may be offensive to nonfarm neighbors, and that the most effective way to protect farm practices is to discourage nonfarm development in agricultural areas. Moreover, the County regards the effect of farm practices coming from farms located within the exclusive farm use zone as reasonable and not subject to restrictions so long as they are no more offensive than what is customarily required to maintain a profitable farm operation and they are in conformity with existing federal, state and local laws.

### 4.6 Extension of Public Services and Facilities

#### Findings

The extension of services, such as sewer and water systems, into rural farm areas permit a degree of nonfarm development that would not otherwise be possible, and encourages the premature conversion of farmland to other uses. Public sewer systems are seldom, if ever, necessary to facilitate farm-related development. Public water systems are often necessary in farm areas but they need not be constructed in such a way that their long-term economic feasibility depends upon nonfarm development of productive farmland.

#### Policy

Extension of services, such as sewer and water systems, into rural farm areas should be appropriate for the needs of agriculture and those nonfarm uses permitted in the exclusive

farm use zone. Services that need to pass through the exclusive farm use zone should not be connected with any use that is not allowed in that zone, should not be assessed as part of the farm unit, and should be limited in capacity to serve specific service areas and identified needs.

#### 4.7 Highway Location

##### Findings

Highway construction has eliminated valuable agricultural land, adversely affected the use of adjacent pastures and undermined the viability of entire farms in Tillamook County. The County's narrow valleys are especially susceptible to the adverse effects of highway construction as farmland can be divided in a way that makes it impossible to conduct a profitable farm enterprise, particularly if adequate livestock and equipment access is not provided under or across highways. Highway construction on farmland also encourages nonfarm developments which can ultimately lead to the removal of an entire area from agricultural production.

##### Policy

Federal, state and local government decisions on the location of highways within Tillamook County must take into account the County's commitment to protect productive agricultural lands. Highways should not be constructed on land within the farm zone unless it is absolutely necessary. The realignment of highway corridors should occur along the edge of foothills above farmland whenever possible. When farmland is divided by highway construction access should be provided under or across highways for livestock and equipment. Culvert sizing and placement shall be consistent with the drainage needs of adjacent farmland. Proposals for the construction of new highways or the alteration of existing ones shall be reviewed by the Tillamook Soil and Water Conservation District to determine their effect on farmland.

#### 4.8 Agricultural/Forestry Interrelationship

Many farm ownerships contain both agricultural bottomlands and forested uplands. The 1978 Census of Agriculture indicates that 9,699 (23%) of Tillamook County's 42,024 farm acres are classified as woodland. Management of these woodlands can be an integral part of a farm operation as income from timber sales may be used to overcome short-term cash flow problems or for needed investment in capital facilities. Farmers also convert land from woodland to pasture or visa versa over time depending upon the type of land, economic conditions and individual preference. Administration of the state land use planning law recognizes the interchangeability of resource land management by not requiring an exception to show why one resource designation is chosen over another when inventoried lands satisfy the definition requirements of both the agricultural and forest goals.<sup>1</sup>

Whether resource land is placed in a farm or forest zone has no significant effect on its tax status. The inclusion of woodland in the farm zone does not disqualify it from the forest lands tax, nor does the inclusion of farmland in the forest zone disqualify it from the farmland tax. However, inclusion of land in the farm zone does increase the probability that it will qualify for the farm tax (see ORS 308.370 and ORS 308.372), and up to 20 acres of woodland may receive a farm tax, if it is contiguous to land in the same ownership that is assessed at the farm rate even if the woodlot is not utilized in conjunction with farm use [see ORS 215.203 (2) (b)].

Tillamook County has taken into account both the resource potential and the preferences of the owners in determining the appropriate zoning of woodland that is included in a farm ownership. Approximately 3,500 acres of woodland in farm ownerships have been included

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<sup>1</sup> See, for example, LCDC's discussion of Agricultural/Forestry Goals Interrelationships (720618/6903)

in the farm zone (EFU). Approximately 2,000 acres have been included in the Forest Zone, and about 4,000 acres in the Small Farm and Woodlot 10-Acre Zone. With 90 percent of the County's land in forest use and only 5 percent in farmland, the County has been inclined to include land with mixed (farm/forest) resource value in the farm zone unless there were compelling reasons to do otherwise.

#### Policy

Tillamook County recognizes the interrelationships between agricultural and woodlot management on many farm ownerships. The conversion of land from one resource use to another shall remain at the discretion of the property owner. The interchange of such lands should not be subject to tax penalties. The County will continue to permit forest uses in the Farm Zone and farm uses in the Forest Zone. The inclusion of woodlot acreage in the Farm Zone should not disqualify it from woodlot management assistance programs.

### 4.9 Agricultural Diversification

#### Findings

Tillamook County's agriculture is dominated by its dairy industry, with dairy-related agriculture producing 90% of the County's farm income in 1979. (See Table 4, p. 6). Five percent of the County's farm income came from such specialty products as nursery stock, forest greenery, and holly; 2.2 percent came from non-dairy-related beef production; 2.5 percent from miscellaneous animals and produces, primarily mink; and 0.2 percent from the sale of hay and forage. All other farm commodities, including field crops, small fruits and berries, truck crops, hogs and pigs, sheep and lamb, and poultry and eggs, produced only 0.3 percent of the County's total farm income. These percentages have remained relatively constant during the decade of the 1970's.

While dairy farming is likely to maintain its strong position in the foreseeable future, there is potential for significant increases in nondairy-related agriculture. The County's climate and soils are well-suited for a number of nondairy products, including beets, potatoes and other truck crops; blueberries, cranberries, raspberries, boysenberries and other berries; nursery stock and holly; poultry and eggs; and such nondairy animals as beef, hogs, rabbits and mink.

The potential for diversification is shown by the fact that in 1968 vegetable sales reached \$225,000 which was 2.3 percent of total farm sales for that year.<sup>1</sup> (The 1980 estimates are \$30,000 and 0.07 percent respectively.) The 1968 figures reflect the high point of Birds Eye's commercial broccoli venture, which produced high yields, excellent quality and an early harvesting date. The cool marine air made possible early plantings of broccoli with early harvest starting in June and continuing until late August or early September. The operation at first proved successful, and in 1968 the acreage was increased to 400 acres. However, it was determined that transportation costs to the processing plant in the valley outweighed the advantages and production was discontinued.<sup>2</sup>

Transportation costs are one of the primary constraints on the development of nondairy-related agriculture, given the County's relative isolation from markets and suppliers of raw materials. Another factor is inexperience in alternative forms of agricultural production. The success of the County's dairy industry demonstrates that the negative effects of the County's

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<sup>1</sup> Source: OSU Extension Service, "Oregon Commodity Date Sheets." OSU, 1971-72

<sup>2</sup> This information is taken from Monty Hempel and Paul Levesque's "A Citizen's Planning Handbook." p C-25

relative isolation can be overcome by expert producers, the development of a local processor, and successful marketing procedures. For example there has been a recent significant increase in rabbit production in the County as a result of the development of a rabbit marketing cooperative. In fact, the County's relative isolation from heavily populated areas can be advantageous to agriculture to the extent that it limits potential conflicts between farmers and nonfarm neighbors.

#### Policy

Tillamook County recognizes the potential of nondairy agriculture, and encourages efforts to diversify the agricultural sector in a manner that is consistent with the continued vitality of the dairy industry.

#### 4.10 Flood Control

##### Findings

More than 15,000 acres of agricultural land are subject to periodic flooding in Tillamook County. Flooding restricts the use of land because of resulting sediment deposition, debris, and limitations placed on animal waste disposal. Flood problems result from both natural factors and man's use of the land.

The two main natural causes of floodwaters are the rapid runoff from the mountains and high tides which block floodwater outlets. These natural causes are compounded by man's intensive use of the land including timber harvesting and road construction in steep forested areas, improper pastureland management, and construction in areas that are subject to periodic flooding.

Floods are more likely to occur during the November to March heavy precipitation period, and may occur as early as September or as late as May. Fairly continuous rainfall during this period saturates the soil and causes heavy runoff from the steep, upper portions of the watersheds. When this heavy runoff reaches the lower portions of the streams in the flatter valleys, water overflows the channels, floods many of the fields, and drops sediment and debris.

Inundation from ocean tidal waters is common along the lower parts of the coastal watersheds. Most damage occurs when the abnormally high tides and severe winter storms coincide. Dikes and tidegates have been installed to protect many areas, but some of these structures are inadequate or in need of repair and many other areas are entirely without such protection.<sup>1</sup>

Flood control generally requires coordinated and comprehensive measures. Individual efforts to control flooding, such as the construction of dikes, may adversely affect neighbors by diverting water onto their property. Efforts to control flooding and its effects are being undertaken by the Tillamook Soil and Water Conservation District, the North Coast RC & D Project, the Oregon Department of Forestry, the Oregon Department of Water Resources, the County Planning Commission and other agencies. Measures to decrease flood damage include enforcing the Forest Practices Act on forestlands, strengthening and enforcing the provisions of the County's Flood Hazard Zone, identifying flood-control reservoir sites, dredging and removing debris from slough and river channels to improve water flow,

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<sup>1</sup> Much of this discussion originated with the US Dept. of Agriculture; "North Coast Resource Conservation Development Projects Resource Action Plan;" September 1973, p. 37-38

maintaining dikes and installing and maintaining pumping stations.

#### Policy

Tillamook County supports coordinated and comprehensive efforts to control flooding on agricultural land by enforcing the State Forest Practices Act and the County's Flood Hazard Zone, improving slough and river channels, maintaining dikes and installing and maintaining pumping stations.

### 4.11 Soil Conservation

#### Findings

Soil may be the County's most valuable resource as it provides forest trees, pasture grasses and other life basic to our survival. The County's heavy annual rainfall and the steepness of over 90 percent of its land create serious soil erosion problems, particularly along more than 250 miles of the County's rivers and streams. Soil erosion eliminates agricultural land and wildlife habitat, and is contributing sediment to the County's waters adversely affecting shipping and navigation, commercial and sports fishing, oyster production and clamming, and other environmental and aesthetic features of the area.

The USDA's "Tillamook Bay Drainage Basin Erosion and Sediment Study"<sup>1</sup> reveals that stream bottom scour and channel bank cutting results in the annual erosion of over 8,200 tons of agricultural soil in the Tillamook Basin, 7,700 tons of which is deposited as sediment in Tillamook Bay. Sheet and rill erosion result in the annual loss of an additional 5,152 tons of agricultural soil in the Basin over 1,000 tons of which is deposited as sediment in Tillamook Bay. The Tillamook Basin contains about one-half of the County's agricultural land; these lands are the source of approximately 15 percent of the sediment that reaches Tillamook Bay.

This study indicates that the following erosion control measures are likely to provide economic benefits: removing of stream debris, riprapping of critically eroding streambed areas, applying pit run gravel on eroding cattle trails, and deferring grazing in problem areas.

Other measures that merit consideration include plowing, seeding, fertilizing and irrigation eroding areas, resloping and revegetating, and installing portable electric fencing to keep livestock away from eroding areas.

Efforts to establish conservation practices that will maintain soils on agricultural lands are being undertaken by the Tillamook Soil and Water Conservation District in cooperation with local, state and federal resource management agencies.

#### Policy

Tillamook County supports efforts to control soil erosion on agricultural lands, including implementation of economically feasible recommendations of the USDA's "Tillamook Bay Drainage Basin Erosion and Sediment Study" that are consistent with Tillamook Soil and Water Conservation District's Coordinated Resource Management planning for stream corridors.

### 4.12 Animal Manure Management

#### Findings

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Animal manure runoff from agricultural operations has been identified as a source of pollution in Tillamook Bay and its tributary streams. The Tillamook Bay Basin contains approximately 60 percent of the County's agricultural land and about one-half of its dairy farms.

In 1974 and 1977, the Federal Food and Drug Administration found that Tillamook Bay shellfish growing waters did not meet the national Shellfish Sanitation Program standards. High fecal coliform bacterial counts were found. Dairy cattle and other farm animals were identified as contributing fecal coliform to streams which flow into Tillamook Bay. This was confirmed in 1980 by the Oregon Department of Environmental Quality's Bacterial Study.

High fecal coliform concentrations, organic materials and suspended solids adversely affect beneficial water uses such as shellfish harvesting, fishing, swimming and other recreational uses. Depletion of oxygen in the water suffocates fish and may create offensive odors. A high concentration of fecal coliforms, indicating the possible presence of pathogenic bacterial and viruses, may pose a health threat to people consuming uncooked shellfish or ingesting contaminated water. The relative contribution of animal manure to these problems is presently undetermined and subject to considerable controversy.

The 1972 Federal Water Pollution Control Act (PL 92-500) and its subsequent amendments set broad water quality goals of fishable and swimmable waters to be attained wherever possible by 1983. Section 208 of this Act establishes Congresses intent to abate pollution from non-point sources.

The Department of Environmental Quality is the designated 208 planning agency in Oregon. In January 1979, Governor Victor Atiyeh designated the State Soil and Water Conservation Commission as the implementing agency for Oregon's 208 Agricultural Nonpoint Source/Water Quality Program on private agricultural lands. The Tillamook County Soil and Water Conservation District (SWCD) had agreed to serve as the local management agency for 208 implementation on agricultural lands in Tillamook County.

The Tillamook County SWCD has developed an Agricultural Non-Point Source Pollution Abatement Plan for the Tillamook Bay Drainage Basin to achieve the objectives of federal and state law for reducing the agricultural pollution problems that exist in the Basin. The SWCD was assisted by the Tillamook Bay Water Quality Committee, the US Soil Conservation Service, the Oregon Department of Environmental Quality and representatives of numerous other state and local entities. The Water Quality Committee is made up of local citizens who have spent more than 15 months working on the plan.

The purpose of the plan is to reduce agricultural pollution in Tillamook Bay through a voluntary program developed and administered at the local level. Agricultural producers will be given reasonable time, technical assistance and available financial support needed to correct pollution problems. However, if satisfactory progress is not being achieved, a local mandatory program will be implemented.

The Tillamook County SWCD has responsibility for determining if a mandatory phase should be implemented. This determination will be based on the recommendation of an evaluation committee that will be made up of representatives from local and state entities, including the Tillamook Board of County Commissioners. Eight of the 11 representatives will be from Tillamook County. Their evaluation of satisfactory progress will be based on the following considerations: (1) progress in developing agricultural pollution abatement plans; (2) progresses in implementing best management practices; (3) water quality monitoring results; and (4) extent of valid agricultural related water quality complaints.

A two-thirds vote is required before the committee can recommend a mandatory phase. Such a mandatory phase can be recommended for the entire Tillamook Bay Drainage Basin, a specific watershed within the Basin or individual agricultural enterprises.

The successful implementation of this plan will ensure continued local control of efforts to reduce agricultural pollution of Tillamook Bay. This will help avoid conflicts between agricultural producers and federal and state agencies.

The animal waste produced on farm throughout the County can be utilized in productive, efficient and non-polluting ways. All manure can be returned as fertilizer to the County's 30,000 acres of hay and pasture soil. The Tillamook County SWCD provides technical assistance and is seeking additional cost-share funds for the construction of dry storage facilities, pumping equipment, liquid holding tanks and improved drainage systems. The SWCD is also sponsoring studies to determine the manure loading capacity of pasture soils.

#### Policy

Tillamook County supports the Tillamook Bay Drainage Basin Agricultural Pollution Abatement Plan's approach to reducing agricultural pollution of Tillamook Bay through a voluntary program developed and administered at the local level. Agricultural producers will be given reasonable time, technical assistance and available financial support needed to achieve the satisfactory progress that is required to avoid implementation of a mandatory program. The objective throughout the County is to utilize animal manure in productive, efficient and non-polluting ways by returning it as fertilizer to the County's hay and pasture land.

### 4.13 Pastureland Management

#### Findings

More than 30,000 acres of highly productive hay and pasture lands, the basis of Tillamook County's dairy and cattle economy, must be carefully managed in order to maintain and enhance their productivity for present and future generations. Forage production on many pastures in the County can be greatly increased if management is improved.

Cooperative efforts to improve 5,000 acres of hay and pasture land annually are being undertaken by private landowners, the Soil and Water Conservation District, the Soil Conservation Service, the Agricultural Stabilization and Conservation Service, the County Extension, and the State Department of Agriculture through weed control, drainage, soil testing, efficient irrigation water management, fencing, rotation grazing plan, and periodic reseeding for improved forage and soil stabilization. The Tillamook Soil and Water Conservation District is also seeking to establish adequate cost share programs for permanent pasture management.

#### Policy

Tillamook County supports appropriate cooperative efforts between private landowners and local, state and federal management land agencies to improve pastureland management, recognizing that increases in productivity will ultimately benefit a majority of the County's citizens.

#### 4.14 Drainage

##### Findings

Poorly drained soils and heavy rainfall combine to limit animal manure management and productivity on more than 15,000 acres of the County's agricultural bottom lands. Artificial drainage is necessary on Brallier, Brenner, Coquille, Hebo and Yaquina soils, and it is helpful on Chitwood, Ginger, and Nestucca soils.

Efforts to improve drainage on the County's farmlands include coordinated planning and technical and cost-share assistance in the installation and maintenance of ditches, tile lines, pumping stations and tide gates. Landowners are currently being assisted by drainage districts, the Tillamook SWCD, SCS, ASCS, North Coast RC&D and other government agencies.

The twelve drainage districts that have been established during the past 70 years can levy taxes for the construction and maintenance of drainage district structures. Consolidation of these districts could provide a more efficient and equitable basis for addressing drainage problems.

##### Policy

Tillamook County supports efforts to improve drainage on existing farmland through coordinated planning and technical and cost-share assistance on such measures as ditches, tile lines, pumping stations and tide gates. Consideration should be given to consolidation of existing drainage districts.

#### 4.15 Irrigation

##### Findings

Most of Tillamook County's soils can benefit from supplemental irrigation during dry summer months through the use of sprinkler systems. Well-drained soils, or those that have been adequately drained artificially, respond well to sprinkler irrigation, with the application of water causing no special management problems. A high percentage of the bottomland is irrigated because water is available. Irrigation of the soils on terraces and on uplands is limited by lack of available water. Irrigation water is obtained mainly from perennial streams, with availability depending upon the possession of legal water rights that are on file with the State Watermaster. According to the 1978 Census of Agriculture, 95 farms utilize sprinkler irrigation on a total of 4,958 acres within the County.

##### Policy

Tillamook County will cooperate with local, state and federal agencies in the effort to secure an increased supply of irrigation water and an equitable distribution among the County's farmers, while maintaining adequate stream flows.

#### 4.16 Weed Control

##### Findings

Noxious weeds, particularly tansy ragwort, continue to infest thousands of acres of private and public land in Tillamook County. All weeds displace more useful vegetation, while tansy ragwort also causes injury, illness and death to livestock.

ORS Chapter 570 recognizes that “noxious weeds... are a menace to the public welfare” and establishes “that steps leading to eradication and control are necessary... and that county, state and federal government should cooperate with individual owners in the control and eradication of noxious weed pests.” ORS 570.515 to 570.600 authorizes county government to establish a weed control district, identify “noxious” weeds, appoint a weed inspector, and take the steps necessary to control noxious weeds. This includes authority for county employees to go upon private land to eradicate weeds when the owner or occupant refuses to do so. In such cases, the cost of eradication can be billed to the owner, and, if necessary, collected by the tax collector in the same manner as taxes are collected.

County government is also authorized to establish a weed control fund (ORS 570.560) and provide cost-share assistance grants to any person owning or occupying land within a weed control district who conducts a weed control project in accordance with state law. The State Department of Agriculture has provided cost-share assistance to the County for weed control since 1976. Such assistance is available for up to 50 percent of the costs of chemicals used, with a current total expenditure limit of \$5,000.

ORS 570.540 provides for the eradication of weeds on public lands and rights-of-way. The State Highway Commission, County government, reclamation districts and municipalities are required “to destroy or prevent the spread or seeding of any noxious weed... on any land owned by them or constituting the right-of-way for any highway, county road, drainage or irrigation ditch, power or transmission line, or other purposes under their respective jurisdictions.”

Tillamook County established a weed control district on August 7, 1925, with burdock, Canadian thistle, Chinese thistle, mustard, and Russian thistle identified as noxious weeds. Tansy ragwort was added to this list on October 2, 1940. The County Commissioners reaffirmed the weed control district and the list of noxious weeds on June 5, 1953. This list needs to be revised to reflect current opinions on what should be included as noxious weeds.

Efforts to control weed infestation on more than 10,000 acres annually through an integrated program of pastureland management, natural predators, approved chemical sprays, cost-share assistance, and enforcement of weed control legislation are currently being undertaken by the County in cooperation with the State Department of Agriculture, County Extension, and the Directors of the Tillamook County Soil and Water Conservation District, who serve as the County’s designated Noxious Weed Advisory Board.

Efforts are currently underway to improve the effectiveness of the County’s weed control program. Such improvement requires the cooperative and coordinated efforts of the landowners of all affected property because individual property owners’ incentives to control weeds are significantly reduced if control isn’t practiced on neighboring properties. The voluntary cooperation of the landowners of all affected properties is being encouraged by assurance that weeds will be controlled on neighboring properties by use of available financial and technical assistance and by enforcement of the relevant provisions of ORS Chapter 570. The State Department of Agriculture has indicated that it will continue to provide cost-share assistance and County extension will continue to provide needed technical assistance.

## Policy

Tillamook County recognizes that continued noxious weed infestation of thousands of acres of private and public land in the County constitutes a menace to public welfare, and that the eradication of such weeds depends upon the cooperative efforts of the owners of all affected

land. The County is committed to maintaining available technical and financial assistance and enforcing the regulations in ORS Chapter 570 that assure the effective and equitable control of noxious weeds on lands within the County.

## 5. TILLAMOOK COUNTY'S EXCLUSIVE FARM USE ZONE

### 5.1 Overview

Tillamook County's Farm (F-1) zone and its Small Farm and Woodlot 20 (SFW-20) zone both qualify under state law (ORS 215.213) as exclusive farm use zones. The purpose of the F-1 zone is "to protect farmland and farm practices and to promote agricultural enterprise on land that qualifies for farm use according to state and county requirements." The purpose of the SFW-20 zone is "to protect and promote farm and forest uses on lands which have resource value, but which are not suited for either the Farm (F-1) zone or the Forest (F) zone because of smaller parcel size, conflicting adjacent uses, adverse physical features or other limiting factors."

Approximately 35,000 acres are in the F-1 zone, with an additional 2,500 acres of farmland in the SFW-20 zone. The protection of farmland afforded by these two zones helps assure that the County's agricultural industry can continue to grow and contribute to the economic well-being of the County.

### 5.2 Consistency with State Law

The state Legislature has stipulated that land within exclusive farm use zones shall be used for those farm and nonfarm uses that are defined or enumerated by state law. ORS 215.203 defines "farm use" and ORS 215.213 enumerates those nonfarm uses that may be allowed in an exclusive farm use zone. Tillamook County's farm zones includes all uses that are allowed under state law. ORS 308.343 provides that the inclusion of any additional uses would disqualify all land within the County's farm zone from receiving an automatic assessment at its farm use value.

The farm zone is designed to be as flexible as possible given the need to protect farmland and farm practices. All farm uses are permitted outright without Planning Commission review as is the propagation or harvesting of a forest product. Uses that are permitted conditionally include commercial activities that provide agriculture products or services such as a feed and seed store or a veterinary clinic; the mining and processing of rock or other subsurface resources; parks, playgrounds, campgrounds and hunting and fishing preserves; and home occupations. Nonfarm dwellings are allowed on the condition that they are situated on land that is not generally suited for agricultural production and if they do not interfere seriously with accepted farming practices on adjacent lands devoted to farm use.

### 5.3 Minimum Lot Size Requirements

The purpose of a minimum lot size requirement for land in the County's farm zones is to assure that productive agricultural land will not be divided into parcels that are too small for commercial farm use. The state agricultural planning goal stipulates that "such minimum lot sizes as are utilized for any farm use zones shall be appropriate for the continuation of the existing commercial agricultural enterprise within the area."

Dairying is the predominant type of agricultural enterprise conducted in Tillamook County,

with 78 percent of the County's gross farm sales coming from dairy products in 1979.<sup>1</sup> An additional 12 percent came from dairy-related cattle and calf production. The 1978 Census of Agriculture (Preliminary Report) lists a total of 388 farms in Tillamook County, with an average size of 108 acres, 25 of which are in woodland. One-third of these farms were smaller than 50 acres. Since "farms" are defined to include "all lands under the day-to-day control or supervision of one person or partnership," and each farm is likely to contain two or more tax lots (either contiguous or noncontiguous), the size of the average farm lot is substantially smaller than 108 acres.

It is convenient, but not necessary, for a farmer to have all of his land in one contiguous area. Many farmers with operating dairies are interested in purchasing or leasing additional land that may be several miles away and in parcels as small as 20-40 acres. This additional land may have a number of dairy-related purposes, including the production of hay or silage or the pasturing of replacement heifers, dry stock, or beef.

While it is difficult to identify a specific critical minimum acreage that will assure continued farm use, Tillamook County's Soil and Water Conservation District Board and a majority of the County's Citizen Advisory Committee members agreed that 40 or more acres are normally required for a viable dairy farm, and that a 4-acre minimum lot size requirement in the County's primary exclusive farm use zone - the F-1 - will help protect commercial agricultural land from conversion to nonfarm uses.<sup>2</sup> In addition to the 35,500 acres placed in the F-1 Zone, approximately 2,500 acres of more marginal agricultural land is among the 7,000 acres in the SFW-20 Zone, which has a 20-acre minimum lot size requirement.

The Small Farm and Woodlot Zone (SFW-20) is designed for areas where a 20-acre minimum is sufficient to provide for farm or forest uses. These lands are generally less suited for resource use than land included in the Farm Zone (F-1) or Forest Zone (F) because of smaller parcel size, conflicting adjacent uses, adverse physical features and other factors. This includes narrow river valleys where ownerships include both steep hill and fairly level bottom land which is not sufficient to sustain either a commercial farm or a commercial forest operation.

Approximately 7,000 acres have been placed in this zone, representing less than one percent of the County's land area. While at least one-third of these acres have mixed farm-forest characteristics, about 2,500 acres are predominantly farm-type land, while the remaining 4,500 acres are predominantly forest-type land. The parcels that contain predominantly farm land average less than 40 acres while those containing forest land average less than 75 acres.

The SFW-20 Zone provides adequate protection for the resource value of the type of land included in the zone. The 20-acre minimum assures that land in the zone will not be divided in acreage rural lots. Moreover, land in this zone is retained for farm and forest uses through restrictions on the types of uses allowed in the zone. The SFW-20 zone qualifies as an EFU zone. Apart from the 20-acre minimum, the zone is more restrictive than either the F-1 or F zones as it combines the restrictive provisions of both zones. The SFW-20 Zone does not allow golf courses as does the F-1 Zone and it contains essentially the same criteria for reviewing conditional use requests as does the F zone. All land divisions in this zone must be reviewed and approved, with particular consideration given to on-site and off-site impacts on farm and forest uses.

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<sup>1</sup> All data included in this paragraph is discussed and documented in Section 1.1 of this report.

<sup>2</sup> Four of the five citizen advisory committees supported the 40-acre minimum, while the Central County CAC preferred a 20-acre minimum.

The F-1 Zone does allow the creation of parcels smaller than 40 acres if approved by the County Planning Commission according to conditions described in subsection 3.002(5) of the County's zoning ordinance, while the SFW-20 Zone allows parcels smaller than 20 acres under the same conditions. This takes into account the fact that parcels smaller than 40 acres can be used for dairy farming if such use is in conjunction with other farmland in the area. And it permits the establishment of alternative commercial farm uses of greater intensity (such as nursery) than commercial farms in the area. However, it must be recognized that some legitimate intensive farm uses such as rabbit or poultry farms need not be located on the County's more productive lands. Nor are the F-1 Zone or the SFW-20 Zone appropriate locations for so-called "hobby farms" whose owner's primary vocation is other than commercial agriculture. These uses can best be accommodated in the County's Small Farm and Woodlot 10-Acres Zone or Rural Residential Zone.

## APPENDIX A DEVELOPMENT OF TILLAMOOK COUNTY'S AGRICULTURAL LANDS CRITERIA

The first draft of the Agricultural Lands criteria was developed during the Fall of 1978 by a committee comprised of Vic Affolter, County Natural Resource Planner, John Massie, County Extension Agent, Bob Pedersen, Soil Conservation Service (SCS) Tillamook District Conservationist, and George Smith, former SCS Tillamook District Conservationist. Technical assistance was provided by Roger Pfenninger, SCS Soils Scientist and Herb Huddleston, Oregon State University Extension Soils Scientist.

These criteria were reviewed and revised by the Tillamook Soil and Water Conservation District Board at three special meetings held during January and February of 1979. A presentation was made to a meeting of the Tillamook Farm Bureau on February 26. Special agricultural planning meetings were held at five locations throughout the County in March. Background for these meetings was provided in a special March issue of the "Morning Star Gazette," the planning team newsletter, which was distributed throughout the County. The March 7 issue of the Tillamook "Headlight Herald" newspaper featured a front-page article describing the agricultural planning process, as well as publicizing the March meetings (see attached articles).

The criteria were reviewed by the County's five Citizen Advisory Committees during their April meetings. Field tests were conducted in May by Affolter, Massie and Pederson. The results of these field tests, along with comments reviewed at public meetings, were incorporated in the final draft that was endorsed by the Tillamook Farm Bureau on June 28 and approved unanimously by the Tillamook Soil and Water Conservation District Board on May 30 (see attached letters), the Tillamook County Planning Commission on June 28, and the Board of County Commissioners on July 27 after extensive public hearings.



## Appendix A INSERTS

**Appendix A IINSERTS**

**Appendix A IINSERTS**

**Appendix A IINSERTS**

APPENDIX B  
BOARD OF COUNTY COMMISSIONERS RESOLUTION

**INSERT APPENDIX B**

**INSERT APPENDIX B**

**INSERT APPENDIX B**

## APPENDIX C CRITERIA FOR EVALUATING TILLAMOOK COUNTY'S AGRICULTURAL LANDS

Four criteria have been developed to evaluate the agricultural suitability of the land in Tillamook County. There may be a need to utilize some of the County's existing and potential agricultural lands for urban and rural nonfarm uses. Therefore, it is important that farmland is not only identified, but is given priorities for its availability for nonfarm uses. This is not done to encourage a process of conversion, but rather to 1) promote preservation of agricultural land, and to 2) guide conversion of the least valuable agricultural land to nonfarm uses if and when such conversion becomes advisable.

The criteria are:

1. Soil Suitability (13)
2. Subject's Parcel Size (4)
3. Surrounding Parcel Size (2)
4. Compatibility of Surrounding Land Use (6)

A weighting system has been devised to indicate the relative importance of each criterion. The respective weights are the numbers in parentheses that follow each criterion. For example, the weights indicate that "surrounding parcel size" is one-third as important as "surrounding land use."

Land will be given a best, very good, good, fair or limited rating according to standards set for each criterion. Four (4) points will be given for a "best" rating, three (3) for "very good", two (2) for "good", one (1) for "fair", and zero (0) for "limited". These ratings will be multiplied by a criterion's relative weight. For example, if the soil on a particular parcel receives a best rating, the parcel would be given 52 points. (We multiply the 4 points it receives for its best rating by its weighting factor of 13.) If the soil had received a very good rating, the parcel would have been given 39 points (3 X 13). The soil rating is then adjusted if the parcel has artificial drainage, if irrigation water is available, or if it is within the 100-year flood plain.

The next step is to rate the parcel according to its size. If it receives a best rating for parcel size, it would be given an additional 16 points (4 X 4). The process continues until the parcel is given points according to its rating on each of the four criteria. These points are then added up to determine the parcels relative suitability for agriculture. Possible scores range from zero (all limited) to 100 (all best).

Priorities are assigned to agricultural land according to its suitability rating:

Priority I:	75 - 100 points
Priority II:	50 - 74 points
Priority III:	25 - 49 points
Priority IV:	0 - 24 points

These priority groupings will be used in determining whether nonfarm development should occur on a particular parcel of land. Priority IV should be given first consideration when there is a demonstrated need for converting existing or potential agricultural land to nonfarm use.

1. SOIL SUITABILITY (Wt. of 13)
  - a. OBJECTIVE

To rate land for agricultural use according to the suitability of the soil for producing agricultural goods.



b. JUSTIFICATION

While the Soil Conservation Service's land capability classification is useful for identifying agricultural lands, a more specific evaluation of each of Tillamook County's soil map units is needed to justify the nonfarm use of any of these lands.

c. STANDARDS

See "Soil Suitability Rating for Tillamook County Land Use Plan" for a discussion of the specific standards used, and the priority groupings of the individual soil map units based on these standards.

2. SUBJECT'S PARCEL SIZE (Wt. of 4)

a. OBJECTIVE

To rate land for agricultural use according to the size of the subject's parcel, including any adjoining parcels under the same ownership.

b. JUSTIFICATION

To assure that a parcel's size is sufficient to support a current or potential farm use.

c. STANDARDS

(16 pts)	Best:	If the parcel is 80 acres or large in size.
(12 pts)	Very Good:	If the parcel is between 40 and 80 acres in size.
(8 pts)	Good:	If the parcel is between 20 and 40 acres in size.
(4 pts)	Fair:	If the parcel is between 5 and 20 acres in size.
(0 pts)	Limited:	If the parcel is less than 5 acres in size.

3. SURROUNDING PARCEL SIZE (Wt. of 2)

a. OBJECTIVE

To rate land for agricultural use according to parcel size within one-quarter mile of the perimeter of the subject site.

b. JUSTIFICATION

Large parcel areas are more suitable for the continuance of agriculture than area areas that have been divided in relatively small parcels.

c. STANDARDS

(8 pts)	Best:	If more than 50% of the surrounding area contains parcels of at least 80 acres in size.
(6 pts)	Very Good:	If between 25% and 50% of the surrounding areas contains parcels of a t least 80 acres in size, or more than 50% of that area contains parcels of at least 40 acres in size.
(4 pts)	Good:	If between 25% and 50% of the surrounding area contains parcels of at least 40 acres in size, or more than

(2 pts)	Fair:	50% of that area contains parcels of at least 20 acres in size. If between 25% and 50% of the surrounding area contains parcels of at least 20 acres in size or more than 50% of that area contains parcels of at least 5 acres in size.
(0 pts)	Limited:	If none of the above standards are met (i.e., less than 25% of the surrounding area contains parcels of at least 20 acres in size, and less than 50% of that area contains parcels of at least 5 acres in size).

NOTE: A parcel should be given the highest rating for which it qualifies according to the above standards.

4. COMPATIBILITY OF SURROUNDING LAND USES (Wt. of 6)

a. OBJECTIVE

To rate land for agricultural use according to the compatibility of adjacent land uses and those that exist within one-quarter mile of the perimeter of the subject parcel.

b. JUSTIFICATION

To restrict the close association of agricultural uses and non-agricultural uses which have the potential of adversely affecting one another.

c. STANDARDS

(24 pts)	Best:	If none of the adjacent land AND not more than 10% of the surrounding area <sup>1</sup> is committed to non-agricultural uses. <sup>2</sup>
(6 pts)	Very Good:	If not more than 10% of the adjacent land AND not more than 25% of the surrounding area is committed to non-agricultural uses.
(4 pts)	Good:	If not more than 25% of the adjacent land AND not more than 50% of the surrounding area is committed to non-agricultural uses.
(2 pts)	Fair:	If not more than 50% of the adjacent land AND not more than 75% of the surrounding area is committed to non-agricultural uses.
(0 pts)	Limited:	If none of the above standards are met (i.e., if either more than 50% of the adjacent land OR more than 75% of the surrounding area is committed to non-agricultural uses.

<sup>1</sup> "Surrounding area" is that area which is within one-quarter mile of the perimeter of the subject parcel.

<sup>2</sup> "Non-agricultural uses" are those uses that are not allowed within the County's Exclusive Farm Use Zone.

## APPENDIX D SOIL SUITABILITY RATING FOR TILLAMOOK COUNTY'S LAND USE PLAN

### AGRICULTURAL POTENTIAL

Tillamook County's soils are initially rated according to their natural ability to produce agricultural goods without managerial inputs such as artificial drainage or irrigation. Texture, slope, depth, natural drainage, and available water holding capacity are the properties<sup>1</sup> that are utilized to divide the soils into five agricultural potential groups: Group I (Best), Group II (Very Good), Group III (Good), Group IV (Fair), and Group V (Limited).

Tillamook County has approximately 40,000 acres in cropland and pasture according to the most recent Soil Conservation Service survey. 8,392 acres (20.8%) have been included in Group I, 7,745 acres (19.2%) in Group II, 8,029 acres (19.9%) in Group III, 12,316 acres (30.6%) in Group IV, and 3,818 acres (9.5%) in Group V.

Four (4) points are given to those soils in Group I, three (3) to those in Group II, two (2) to those in Group III, one (1) to those in Group IV, and zero (0) to those in Group V. These rating points are multiplied by 13 (the relative weight for soil suitability) to determine the number of points that are given a parcel for the agricultural potential of its soil. Adjustments are made for artificial drainage, irrigation water, and flooding to determine the total score for soil suitability.

### MULTIPLE SOILS

If a parcel has two or more soils which fall into different suitability groups, a weighted average is taken to determine the overall soil suitability value. For example, if one-half of a parcel is made up of a Group II soil (which has a 39 point value) and the other half is a Group IV soil (which has a 13 point value), the soil suitability score for the entire parcel is 26 points ( $1/2$  of 39 plus  $1/2$  of 13 = 20).

### ARTIFICIAL DRAINAGE

Drainage is a major problem on much of Tillamook County's agricultural land because of heavy rainfall and the low position and slow permeability of many soils. Artificial drainage is necessary on the Brallier, Brenner, Coquille, Hebo, and Yaquina soils. It is helpful on the Chitwood, Ginger and Nestucca soils.

Artificial drainage increases the soil's potential for agricultural use. This is taken into account by giving the soil the rating it receives if it is well or moderately well drained as the result of the installation of appropriate drainage measures. The cost of installation is accounted for by deducting 8 points if dikes, tidegates, and pumping stations were required (Brallier, Brenner and Coquille). Four points are deducted if only field ditches or tile lines were required (Hebo, Yaquina, Nestucca, Chitwoods, and Gingers).

### IRRIGATION

Most of Tillamook County's soils can benefit from irrigation during dry summer months. This is taken into account by subtracting 5 points if the parcel does not have irrigation water available. (The availability of irrigation water is determined by the legal water rights that are on file with the state watermaster).

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<sup>1</sup> The sources of this information are the Soil Conservation Service's "Tillamook Area Soil Survey" (1946), and their more current "Soil Interpretations for Oregon" (OR-1's). These OR-1's are the Soil Conservation service's description of the characteristics or properties of each soil.

## FLOODING

Flooding can restrict the use of agricultural lands because of resulting sediment disposition, debris, and limitations placed on waste disposal. The effect of flooding is taken into account by subtracting 5 points if the parcel is within the 100-year flood plain as defined on CH2M Hill's Flood Insurance Rate Map.

### GROUP I: BEST SOILS (52 pts)

Soils with best agricultural potential are those that are 60 inches or more deep. They have a total available water holding capacity of 9 or more inches. Slopes are 3 percent or less. They are well to moderately well drained. Soil surface textures allowed in this group are loam and silt loam. Total acreage is 8,392 (20.8%).

DEPTH	AWC	SLOPE
60" or more	9" or more	3% or less
DRAINAGE CLASS	TEXTURE	
Well or moderately well	Loam and silt loam	

#### SOILS INCLUDED IN THE BEST GROUP:

1. Nehalem silt loam, 0-3% slopes (IIC)<sup>1</sup> (8,392)<sup>2</sup>

### GROUP II: VERY GOOD SOILS (39 pts)

Soils with very good agricultural potential are those that are 60 inches or more deep. They have a total available water holding capacity of 7.5 or more inches. Slopes are 7 percent or less. They are somewhat poorly to somewhat excessively drained. Soil surface textures allowed in this group are loam and silt loam. Total acreage is 7,745 (19.2%).

DEPTH	AWC	SLOPE
60" or more	7.5 or more	7% or less
DRAINAGE CLASS	TEXTURE	
Any in Group I, plus somewhat poor or somewhat excessive	silt loam and loam	

#### SOILS INCLUDED IN THE VERY GOOD GROUP:

1. Quillayute silt loam 0-% (IIE) (2,664)
2. Knappa silt loam, 0-7% slopes (IIE) (3,669)
3. Nestucca silt loam, 0-3% slopes (IIW) (1,412)

### GROUP III: GOOD SOILS (26 pts)

Soils with a good agricultural potential are those that are at least 40 inches deep. They have a total available water holding capacity of 5.0 inches or more. Slopes are 12 percent or less. These soils are

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<sup>1</sup> SCS Land Capability Classification

<sup>2</sup> Acreage in cropland and pasture

somewhat poorly to somewhat excessively drained. Surface textures allowed in this group are loam, silt loam, sandy loam, gravelly loam, clay loam, sandy clay loam, silty clay loam, or fine sandy loam. Total acreage is 8,029 (19.9%).

DEPTH	AWC	SLOPE
40" or more	5" or more	12% or less
DRAINAGE CLASS		TEXTURE
Any in group I or II (somewhat poor to somewhat excessive)		Any in Group I or II plus sandy loam, gravelly loam, clay loam, sandy clay loam, silty clay loam, or fine sandy loam

SOILS INCLUDED IN THE GOOD GROUP:

1. Gardiner fine sandy loam, 0-3% slopes (IIs) (330)
2. Gardiner fine sandy loam overwash, 3-7% slopes (IVe) (298)
3. Nehalem silt loam, overwash, 3-7% slopes (IVe) (173)
4. Quillayute silt loam, moderately deep, 0-12% slopes (IIIe) (150)
5. Knappa silt loam, 7-12% slopes (IIIe) (214)
6. Knappa silt loam, moderately deep, 0-12% slopes (IIIe) (631)
7. Meda gravelly loam, 3-12% slopes (IIIe) (1,235)
8. Gauldy loam, 0-7% slopes (IIs) (931)
9. Astoria silt loam, 3-12% slopes (IIIe) (1,026)
10. Winema silt loam, 3-12% slopes (IIIe) (360)
11. Chitwood silt loam, 0-7% slopes (IIIw) (1,322)
12. Chitwood silt loam, 7-12% slopes (IIIw) (82)
13. Ginger silt loam, 0-7% slopes (IIw) (955)

GROUP IV: FAIR SOILS (13 pts)

Soils with a fair agricultural potential are those that are at least 20 inches deep. They have a total available water holding capacity of 2.5 inches or more. Slopes are 20 percent or less. These soils are very poorly to excessively drained. Surface textures allowed in this group are loam, silt loam, sandy loam, gravelly loam, clay loam, sandy clay loam, silty clay loam, fine sandy loam, loamy fine sand and peat. Total acreage is 12,316 (30.6%).

DEPTH	AWC	SLOPE
20" or more	2.5" or more	20% or less
DRAINAGE CLASS		TEXTURE
Any in group I – III plus poor, very poor or excessive		Any in Group I - III plus loamy fine sand and peat

SOILS INCLUDED IN THE GOOD GROUP:

1. Gardiner fine sandy loam, 0-3% slopes (IIs) (330)
2. Gardiner fine sandy loam overwash, 3-7% slopes (IVe) (298)
3. Nehalem silt loam, overwash, 3-7% slopes (IVe) (173)
4. Quillayute silt loam, moderately deep, 0-12% slopes (IIIe) (150)
5. Knappa silt loam, 7-12% slopes (IIIe) (214)
6. Knappa silt loam, moderately deep, 0-12% slopes (IIIe) (631)
7. Meda gravelly loam, 3-12% slopes (IIIe) (1,235)
8. Gauldy loam, 0-7% slopes (IIs) (931)

9. Astoria silt loam, 3-12% slopes (IIIe) (1,026)
10. Winema silt loam, 3-12% slopes (IIIe) (360)
11. Chitwood silt loam, 0-7% slopes (IIIw) (1,322)
12. Chitwood silt loam, 7-12% slopes (IIIw) (82)
13. Ginger silt loam, 0-7% slopes (IIw) (955)

**GROUP V: LIMITED SOILS (0 pts)**

These are SCS class VI-VIII soils or those with a slope greater than 20 percent. They fail to qualify for our best, very good, good or fair rating primarily because of limitations in their depth or slope. Most of these soils have a high risk of erosion if protective cover isn't maintained. With proper management they can be used for pasture and hay or other specialized crops. Total acreage is 3,818 (9.5%).

**SOILS INCLUDED IN THE LIMITED GROUP: (Listed in alphabetical order)**

1. Astoria silt loam, 20-40% slopes (VIe) (1,300)
2. Astoria silt loam, 40-60% slopes (VIIe) (165)
3. Gaudy loam, shallow, 0-7% slopes (VI) (275)
4. Hembre silt loam 20-40% slopes (VIe) (233)
5. Hembre silt loam 40-60% slopes (VIIe) (274)
6. Hembre silt loam, moderately deep, 20-40% slopes (VIe) (16)
7. Hembre silt loam, moderately deep,
8. Made land (VIII) (151)
9. Neskowin silty clay loam, 20-40% slopes (IVe) (165)
10. Neskowin silty clay loam, 40-60% slopes (VIe) (405)
11. Netarts fine sandy loam (VIIe) (30)
12. Riverwash (VIII) (150)
13. Tide flats (VIIIw) (106)
14. Winema silt loam, 20-40% slopes (VIe) (483)
15. Winema silt loam, moderately deep, 20-40% slopes (VIe) (133)

**TABLE D1  
STANDARDS FOR SOIL SUITABILITY GROUPINGS**

<b>Soil Characteristics</b>	<b>Group I Best</b>	<b>Group II Very Good</b>	<b>Group III Good</b>	<b>Group IV Fair</b>	<b>Group V Limited</b>
Texture	Loam and silt loam	Loam and silt loam	Loam, silt loam, sandy loam, clay loam, sandy clay loam, silty clay loam, and fine sandy loam	All in Group II, plus loamy fine sand and peat	Any
Slope	3% or less	7% or less	12% or less	20% or less	Any
Depth	60" or more	60" or more	40" or more	20" or more	Any
Available Water Capacity	9" or more	7.5" or more	5" or more	2.5" or more	Any
Drainage	Well or moderately well	Somewhat poor to somewhat excessive	Somewhat poor to somewhat excessive	Very poor to very excessive	Any

APPENDIX E  
US DEPARTMENT OF AGRICULTURE LETTER

**INSERT APPENDIX E**

APPENDIX F  
JERRY WOODWARD & HEADLIGHT-HERALD ARTICLES

**INSERT APPENDIX F**



APPENDIX G  
HEADLIGHT-HERALD ARTICLES

**INSERT APPENDIX G**

**INSERT APPENDIX G**