

CHAPTER THREE -- NATURAL RESOURCE LANDS

The Washington State Growth Management Act of 1990, (RCW 36.70A.020) states the following goal for natural resource industries: "Maintain and enhance natural resource based industries, including productive timber, agricultural, and fisheries industries. Encourage the conservation of productive forest lands and productive agricultural lands, and discourage incompatible uses."

Thurston County implements this statewide goal through policies and programs tailored to our local community's vision for the future of agriculture, aquaculture, forestry, and mineral resources.

I. AGRICULTURE RESOURCES

Community vision: The residents of Thurston County envision a diverse and thriving agricultural industry that is able to respond quickly to changing market conditions. They recognize the essential role of land conservation and local food production in maintaining the quality of life and long-term sustainability of the community. In addition, they recognize the multiple benefits provided by farmland, including wildlife habitat and flood control. The community also recognizes that maintaining viable agricultural resources requires a partnership with the farming community.

The community as a whole takes responsibility for conserving prime farm lands, promoting local markets, minimizing incompatible land uses, and providing other community support. This includes support for regulatory processes that are sensitive to the needs of farmers and that recognize the need to protect the environment. Farmers take responsibility for preserving soil fertility and ground and surface water quality, and for promoting a land stewardship ethic for existing and future generations.

Background: Agriculture in Thurston County has an important and varied role. Although Thurston County is not often noted as a farming county, local agriculture accounts for almost 15 percent of the County's land use and produces over \$120 million worth of farm products a year. A thriving local agricultural industry is essential to the long-term sustainability of the community. It preserves nonrenewable resource land, enhances regional self-reliance for food and jobs, maintains diversity of the local economy, reduces dependence on petroleum products, and increases the quality of life. Many local farms provide additional benefits to the larger community such as flood control, wildlife habitat protection, and scenic open space. Some farms also provide seasonal recreation opportunities, such as corn mazes, pumpkin patches, hay rides, Christmas fairs, and petting zoos. As the county's population continues to grow, the need for conservation measures to protect agricultural resources intensifies because of increased development

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pressure on farmlands and greater local demand for agricultural products. This interconnection between urban and rural residents within the county and local farmers points to the need for community-wide awareness, appreciation, and support for farming.

Farming Diversity and Markets: Thurston County products range from nursery stock to hay, from strawberries to dairy products, representing the diversity of our local resources. This diversity is possible due to the unique soil and water resources that occur here and the variety of markets available for farm products. For example, sandy, well-drained soil types in areas throughout the county give rise to very successful seedling tree enterprises. These soils allow for the planting and harvesting of plants during wet weather, when other soils are impossible to work. This characteristic allows crops to be grown here that are difficult to grow on heavier soils. In addition, clean water from relatively shallow aquifers provides for the irrigation needs of a variety of different crops.

Thurston County has a diversity of types of farms. They include larger-scale commercial farms, organic farms, historic family farms, smaller-scale, close-to-market produce farms, orchard farms, and part-time farming operations. Community-Supported Agriculture (CSA) farms have become popular within the county, providing a direct relationship between the consumer and the farm on which an agricultural product is raised. Over 30 local farms sell their produce directly to consumers, through the Farmers Market, U-Pick, special orders, and roadside farm stands. Fish farming operations have also located here, finding substantial quantities of clean water, an important factor in the successful rearing of fish (see Aquaculture section, below). Along with chickens, cows, and sheep, Thurston County farmers raise alpacas, llamas, emus, and other diverse types of livestock. Several turf growing companies have also located in Thurston County partly because of the county's proximity to a major marketing area and because of the availability of good farm ground. Proximity to markets has been a factor in sustaining the county's egg and poultry producers (Thurston County leads the state in egg production).

Farmers in Thurston County are affected by changing conditions: markets, federal, state and local regulations, land costs, water rights issues, and land uses surrounding farming areas. They are affected by labor shortages and limited infrastructure within the county, such as processing plants and agricultural suppliers. New farmers have a special need for more information about the industry, such as market conditions, and new crops and technology. Farmers in Thurston County, regardless of farm size or commodity produced, share a common sense of stewardship and love of the land. They want farming to continue in this county. Due to market and regulatory issues which are outside the control of local farmers, there is a need for a comprehensive approach to maintain the commercial viability of local agriculture. Farmers need to be flexible and capable of growing a diversity of crops to remain competitive, and there needs to be a program of community support for local agriculture. There is also a need for protection of an affordable land base, soil fertility, and ground and surface water quality and quantity, in order to maintain and enhance resource opportunities for existing and future generations.

Farmland Conversion: An overriding philosophy in this Plan is that in order to preserve

agricultural land for future generations, the business of agricultural production must remain economically viable. Agricultural producers serve a vital role in the care and management of prime agriculture lands as well as make significant economic, cultural, and environmental contributions to the quality of life in Thurston County. This Plan places great emphasis on protecting the economic viability of agriculture businesses to encourage agricultural producers to continue to serve as stewards of the land and contributors to the quality of life in the future.

Food, feed, forage, fiber, and oil seed crops are all best produced on farmland soils that provide superior physical and chemical characteristics. Historically, valuable agricultural lands have been diverted and eliminated by urbanization in the form of low-density suburban sprawl located outside cities and their urbanized environments. In 1970, the Washington State Legislature passed the Open Space Tax Act, recognizing the need to protect farmlands from high property taxes in an effort to stem conversion of farmland to urban and suburban land uses. Thurston County administers the Act through a local farm and agricultural tax classification that provides eligible farmers the ability to have their productive farmland taxed at its current use, instead of its "highest and best use." This significant property tax savings helps reduce pressures to convert farmland, and helps relieve speculative land values which drive up property tax assessments. While many farmers are currently enrolled in this program, some are not or do not know how to enroll. The policies and action recommendations provide for encouraging enrollment and publicizing the program.

Another threat to increased farmland tax values is taxes or assessments for sewer, water, public utility districts, local improvement districts, and utility local improvement districts. The policies discourage the inclusion of farmland in these districts.

Agricultural lands of long-term commercial significance: The Growth Management Act (RCW 36.70A.160) requires counties to designate agricultural lands of long-term commercial significance. Criteria used to designate agricultural land of long-term commercial significance are based on: (1) the Washington State Department of Community, Trade and Economic Development's (CTED) guidelines for the classification and designation of resource lands; (2) existing Thurston County policies; and (3) an analysis of local conditions. These criteria include:

1. Soil Type:

The classification and identification of agricultural lands of long-term commercial significance is based upon the land capability classification system of the United States Department of Agriculture Handbook No. 210. Those classes of agricultural lands are based upon consideration of growing capacity, productivity, and soil composition. They have been incorporated into map units of the Department's soil surveys. The following list of prime farmland soils in Thurston County is based on the Soil Conservation Service's Soil Survey of Thurston County, Washington, 1990. Designated lands should include predominantly prime farmland soils.

SCS Map Unit Soil Description

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14	Bellingham silty clay loam (where drained)*
26	Chehalis silt loam
29	Dupont muck (where drained)*
31	Eld loam
36	Everson clay loam (where drained)*
37	Galvin silt loam, 0 to 5 percent slope
38	Giles silt loam, 0 to 3 percent slope
41	Godfrey silty clay loam (where drained)*
50	Kapowain silt loam, 0 to 3 percent slope
64	Maytown silt loam
69	Mukilteo muck (where drained)*
70	Mukilteo muck (drained)*
71	Newberg fine sandy loam
72	Newberg loam
73	Nisqually loamy fine sand 0-3 percent slope (where irrigated)
75	Norma fine sandy loam (where drained)*
76	Norma silt loam (where drained)*
86	Prather silty clay loam, 3 to 8 percent slope
88	Prather silty loam (where drained)*
89	Puyallup silt loam
97	Salkum silty clay loam, 3 to 8 percent slope
100	Scamman silty clay loam, 0-5 percent slope (where drained)*
104	Semiahmoo muck (where drained)*
105	Shalcar muck (where drained)*
106	Shalcar Variant muck (where drained)*
107	Skipopa silt loam, 0-3 percent slope
115	Sultan silt loam
120	Tisch silt loam (where drained)*
126	Yelm fine sandy loam, 0 to 3 percent slope

** Large areas which are known to qualify as Class I wetlands, (wetlands with threatened or endangered species) and which are not already in agricultural use, should be excluded from designation.*

2. The Availability of Public Facilities and Services:

Since lands within Urban Growth Areas, as established within this Comprehensive Plan, are intended to be served by public facilities and services within a twenty-year period, agricultural lands of long-term commercial significance should be located outside of these boundaries.

3. Existing Land Use and Tax Status:

Designated agricultural lands should include only areas that are used for agriculture. Aerial photograph interpretation can identify areas used for agriculture. In addition, property enrollment in the Open Space Agricultural Tax Program is an indicator that the existing land use is commercial agriculture.

4. Relationship or Proximity to Urban Growth Areas:

Since lands within Urban Growth Areas, as established within this Comprehensive Plan, are intended to be developed at urban densities over a twenty-year period, agricultural lands of long-term commercial significance should be located outside of those boundaries. Furthermore, designated agricultural lands should be separated from urban residential densities by a natural or man-made feature, (e.g., railroad, road, or river), in order to avoid potential land use conflicts.

5. Predominant Parcel Size:

For Thurston County, the predominant parcel size is 20 acres or more, which, in conjunction with soil type, provides economic conditions sufficient for managing agriculture lands for long-term commercial production.

6. Land Use Settlement Patterns and Their Compatibility With Agricultural Practices:

Except within urban growth areas, adjacent residential development should be minimal and at rural densities of one unit per five acres. Recent subdivision activity near or adjacent to designated agricultural lands is an indication of settlement patterns that may have an effect on the long-term viability of agriculture. The most compatible land uses within and adjacent to long-term agricultural lands include forestry, mining, parks and preserves, and open space.

7. Proximity of Markets:

Local or regional markets should be available. Designated agricultural lands should have access to road, rail, or air transportation routes to markets.

8. Agricultural Diversity:

A diversity of agricultural activities should exist, or the area should be sufficiently large to support diverse agricultural activities. No single designated agricultural area should be smaller than 320 acres, or 200 acres if near another designated area. This helps assure land use compatibility for long-term resource use, and a diversity of agriculture uses in one area. Boundaries should follow landmarks visible on the ground when possible, to provide visual distinction of land use areas.

9. Environmental Considerations:

Designated agricultural lands should be outside of Natural Shoreline Environments if they are not already being used for agriculture. The Shoreline Master Program regulations severely limit the ability to convert such areas to agricultural uses, and from one agricultural use to another.

The above criteria were applied to all agricultural lands of Thurston County and appropriate areas were designated as areas of long-term agricultural significance. These lands are shown on Map M-42. Future lands that meet these criteria may also be considered for designation at the request of the farmland owner.

Also included on Map M-42 are two areas of designated agricultural lands located in the Nisqually Valley. These areas merit special consideration due to the unique values the Nisqually Valley holds. The following excerpt from the Nisqually Sub-Area Plan highlights those unique values:

"The Nisqually Planning Area serves as the eastern gateway to Thurston County. The 40 million yearly travelers along the I-5 Corridor will recognize it as one of the few undeveloped river valleys between Olympia and Everett. It is distinguished by the broad open areas of the Nisqually Wildlife Refuge north of I-5 and the rural farms south of the freeway. This picturesque rural setting is framed with a wooded hillside extending the length of the western McAllister Bluff which loops back into the valley. ...It is this combination of farm and forest, hillside and valley, or clusters of development and adjacent open areas which gives this planning area its distinctive character."

Farmland within the McAllister Springs aquifer recharge area was not found to meet long-term designation criteria due to the proximity of urban land uses to the north and the sensitivity of the aquifer to pesticide and fertilizer use, which may limit the viability of some types of farming operations. Low density zoning is maintained in this area, as are special provisions to protect water quality from the adverse impacts of a variety of land uses.

Redesignation of Agricultural Areas. While the emphasis of this Plan is to prevent the loss of agricultural lands, the County is subject to trends and events that it has little ability to control. While the areas designated for long-term agricultural use meet the primarily physical criteria for long-term commercial use, other factors may arise that can render commercial agriculture activity completely non-viable. If farming economics changes so as to affect the long-term potential for farming in a substantial portion of an agriculture district, the land use designation should be reconsidered.

Piecemeal redesignation of lands within the designated agricultural areas should not be allowed. The farm areas designated as agricultural lands of long-term commercial significance were chosen because there was a critical mass of operating farms with significant investments in land, buildings, and other improvements, productive farm soils, and absence of incompatible land uses. The piecemeal redesignation of individual properties from agricultural use to residential use can have a domino effect. Conflicts between new residents and surrounding farmers make it harder for the farms to continue. These conflicts also add pressure to those surrounding farmers to seek redesignation of their land. Therefore, the reevaluation of agricultural land should occur only for whole areas of land designated as agricultural land of long-term commercial significance.

Redesignation of the agriculture areas to other land use designations should be taken up only when changes in economic conditions, surrounding land use or regulatory conditions are negatively affecting farms throughout the district, over a period of several years. The losses of an individual farm should not be reason, by itself, for eliminating or endangering the remaining acres of Thurston County's best resources of agricultural land in the future.

The following criteria are provided to capture, in a general way, the limited nature of the circumstances under which the County should reevaluate a whole area designated as agricultural land of long-term commercial significance.

- A. Changes in surrounding land use severely inhibit or severely interfere with continued agriculture use;
- B. Changes in market conditions severely reduce the economic viability of agriculture use; or
- C. Changes in regulatory requirements severely reduce the economic viability of agriculture use.

These circumstances should create severe losses lasting several years, covering a wide range of crops or products, and affect a majority of the producers in the area, before a reevaluation of agricultural lands is undertaken. One issue of concern is the ability of farmers to secure water rights for changing agricultural operations. More attention to this issue is needed at the state and local level.

II. AQUACULTURE RESOURCES

Community vision: The residents of Thurston County recognize that aquaculture is of statewide and national interest. Properly managed, aquaculture can result in long-term over short-term economic and environmental benefit. Aquaculture, like other natural resource industries, is an important component of the county's rural character and economy. The residents of Thurston County envision a thriving and robust aquaculture industry and take responsibility for ensuring that its potential can be fully realized. They also strive to initiate and maintain a constructive and progressive partnership with the aquaculture industry.

The aquaculture industry, comprised of responsible users of Thurston County's marine and fresh water resources, promote wise stewardship of tidelands and other areas associated with their aquaculture activity. The aquaculture industry supports regulations that are operationally-feasible, scientifically sound, and fairly enforced. They are committed to environmental protection through full implementation of environmental codes of practice.

Background: A thriving shellfish industry is located along the county's Puget Sound shorelines. The warm, nutrient rich tide flats of southern Puget Sound is an exceptionally valued shellfish growing area. Shellfish growers have taken advantage of this, producing more oysters than anywhere else in Puget Sound. Washington State is a national leader in shellfish production.

In addition to these over-the-water marine based aquaculture operations, several land based fish farms reside in Thurston County. These operations rely on the plentiful and clean water from shallow aquifers to raise fish, many pumping millions of gallons a day. Unlike surface waters that have fluctuating temperatures dependent on the season, ground water remains a constant 50 degrees, allowing for the consistent and sustained growth of the fish.

Protection of commercial and recreational shellfish resources. There are over 40 commercial shellfish operations and associated industries in Thurston County. Shellfish is also harvested recreationally in public parks and on private beaches, and by the Tribes for their resource needs. Shellfish harvesting is an important aspect to quality of life in the County. Protection of this commercial and cultural resource is a growing concern in Thurston County as our population continues to grow and the downstream impacts of development continue to threaten some shellfish growing areas. The Washington State Department of Health monitors water quality for shellfish harvesting. Thurston County references the Department of Health's Annual Inventory of Commercial and Recreational Shellfish Areas to determine what lands are designated as harvestable for shellfish.

Protection of water quality, both ground water and surface water, is particularly important for commercial and recreational shellfish harvesting. Downgrades in water quality affect

commercial growers and public health, and the County has seen an increase in the frequency of downgrades of shellfish growing areas in recent years. The County forms a shellfish protection district when there is a downgrade, and works to restore the resource to a harvestable level.

The County is concerned with protecting existing and future aquaculture operations from incompatible development. County policies discourage encroachment from incompatible uses to avoid nuisance conflicts and water quality degradation. The policies also provide that normal aquaculture practices should not be considered a nuisance unless they threaten the public health and safety. Clearly there is a need for balance on this issue, since aquaculture operations operate in areas where the environment is particularly fragile, and where other kinds of activities occur. Because of this, the policies recommend that adverse impacts from aquaculture operations be minimized. Development of guidelines to help guide aquaculture operations in avoiding potential conflicts is also proposed.

Tribes and shellfish. Tribes are a co-manager of shellfish resources. The Squaxin Island and Nisqually tribes are important stewards of all shellfish that occur in their usual and accustomed harvest areas in the waters of Thurston County, and have rights to harvest 50% of the resource for their own use. The rights and responsibilities of tribes are an important consideration when planning for the protection and development of the shellfish resource, and when regulating land uses upstream from shellfish areas.

Upland fish farms. In addition to shellfish growing areas, Thurston County is also home to a handful of fin fish farms on upland sites. Land-based fish rearing facilities, seaweed and net pen rearing facilities also require good water quality to operate. Supporting this unique aquacultural activity, while minimizing potential water pollution and land use conflicts, is an important goal of the Comprehensive Plan.

III. FOREST RESOURCES

Community vision: The citizens of Thurston County recognize the multiple public benefits of public and private forest land, including economic benefits, wildlife habitat, scenic resources, and recreational opportunities. Supporting economically viable forest land slows the conversion of rural areas to other non-resource uses and supports a rural economy of both large and small forestry operations. The community wishes to avoid discouraging forestry by avoiding regulations that place an undue burden on forest landowners, while recognizing the responsibility of forest landowners to be good stewards of the County's forests and other environmental resources.

Background: Forest lands are a paramount economic resource for Thurston County and the State of Washington. This valuable resource must be conserved and protected to ensure that the production of timber and forest products continues into the future. It is the State's policy to encourage forestry and restocking of forests (RCW 84.33.010). It is through good forestry management and stewardship that environmental benefits will be

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enhanced in the areas of water quality, air quality, carbon sequestration, reduction of soil erosion, lessening of storm and flood damage, protection of valuable wildlife habitats, biodiversity, and the provision of scenic and recreational spaces.

Forestry production activities have had a long history in Thurston County evolving from the timber "mining" days of the late 19th and early 20th centuries to the sustained yield forestry management that occurs today. Currently, approximately 60 percent of Thurston County is covered by forest, and over 30 percent of the County is managed for forestry by private or public operators. Additional forest land is maintained on Fort Lewis. DNR-managed trust lands in the county, such as Capitol Forest, are managed for the dual purpose of conserving forest resource lands and producing a long-term income from timber harvesting for schools and other public institutions.

In addition to timber and timber by-products, a variety of other economic products are harvested from forests in Thurston County including salal, ferns, and moss for the floral industry and chantrell mushrooms for a growing local and export food market.

Minimizing Conflicts Between Forestry and Other Land Uses: An issue addressed by the policies involves the potential impacts that adjacent land uses may have on forestry operations, and conversely, the impacts that forestry activities may have on adjacent uses and the general environment. The policies provide that normal forestry practices should not be considered a nuisance unless they threaten the public health and safety. This is consistent with RCW 7.48.305, which states that forest practices undertaken in conformity with all applicable laws and established prior to surrounding non-forestry uses, are presumed to not constitute a nuisance unless the activity has a substantial adverse effect on the public health and safety. However, the policies also recognize that forestry operations need to minimize the potential adverse impacts on other uses and the environment. Thus, the policies try to strike a balance between forestry management and other activities and environmental concerns.

Designating Forest Lands of Long-Term Commercial Significance: The Growth Management Act requires cities and counties to classify and conserve forest lands of long-term commercial significance. The Act defines "long-term commercial significance" as determined by the growing capacity, productivity, and soil composition of the land for long-term commercial production, in consideration of the land's proximity to population areas, and the possibility of more intense uses of the land. The Washington State Department of Community, Trade and Economic Development (CTED) recommends that classification of forest lands be based on the private forest land grades of the Department of Revenue (WAC 458-40-530; see Table 3-1), among other criteria. Thurston County employed this land grade system, in addition to physical, biological, economic, and land use factors, to help determine which areas should be designated as forest lands of long term commercial significance.

**Table 3-1
Washington State Private Forest Land Grades**

<u>Species</u>	<u>Site Index (Growth Potential)</u>	<u>Land Grade¹</u>
Douglas Fir	136 ft. and over	1
	118 - 135 ft.	2
	99 - 117 ft.	3
	84 - 98 ft.	4
	under 84 ft.	5
Western Hemlock	136 ft. and over	1
	116 - 136 ft.	2
	98 - 115 ft.	3
	83 - 97 ft.	4
	68 - 82 ft.	5
	under 68 ft.	6
Red Alder	117 ft. and over	6
	under 117 ft.	7

The predominant species growing in Thurston County is Douglas Fir. There is no occurrence of land grade 1, and very little of land grade 4. Most of the county is evenly split between land grade 2 and land grade 3. For designating forest lands of long-term commercial significance, Thurston County initially identified those areas where forest land grade 2 predominates.

In addition to physical growing conditions, however, the state also requires that the county consider the effects of proximity to population areas and the possibility of more intense uses of the land, as indicated by:

1. The availability of public services and facilities conducive to the conversion of forest land.

In Thurston County, this is defined as the areas where the extension of public services and facilities is not planned for at least 20 years. Since lands within the Urban Growth Area boundaries, as established within this Comprehensive Plan, are intended to be served by public facilities and services within a 20-year period, forest lands of long-term commercial significance should be located outside of these boundaries.

¹ Land Grade 1 = highest, Land Grade 7 = lowest.

2. The promixity of forest land to urban and suburban areas and rural settlements: forest lands of long-term commercial significance are located outside the urban and suburban areas and rural settlements.

In addition to being outside Urban Growth Areas, long-term forest lands should be far enough from urban areas that land use conflicts are avoided.

3. The size of the parcels: forest lands consisted of predominantly large parcels.

For Thurston County, this means parcel sizes of predominantly 640 acres or larger.

4. The compatibility and intensity of adjacent and nearby land use and settlement patterns with forest lands of long-term commercial significance.

For Thurston County, this means that residential development should be minimal within the surrounding area and generally at a rural density of one unit per five acres to limit land use conflicts with forestry operations, such as trespassing, vandalism, shooting, and dumping. Other compatible land uses within and adjacent to commercial forestry include agriculture, mining, parks, preserves, and other open space. Each area designated as forest land of long-term commercial significance should total approximately 5,000 acres or more.

5. Property tax classification: property is assessed as open space or forest land pursuant to Chapter 84.33 or 84.34 RCW.

Thurston County considered properties enrolled in the Classified or Designated Timber programs, as well as public land managed for timber production.

6. Local economic conditions which affect the ability to manage timber lands for long-term commercial production.

Economic conditions should be conducive to long-term timber management. In Thurston County, unfavorable economic conditions include locations with high administrative costs due to complaints from nearby landowners, locations requiring extensive security control efforts, and locations in which allowable forest practices such as burning and chemical applications will significantly interfere with other permitted land uses. Favorable economic conditions include land grade 2 forest soils, which provide (in conjunction with large parcel sizes) the growth potential to manage timber lands for long-term commercial production.

7. History of land development permits issued nearby.

For Thurston County, this means that recent residential development is an indicator of a pattern or direction of growth that may be encroaching on the forest land.

The above criteria were applied throughout unincorporated county areas to designate those forest lands of long-term commercial significance. Those lands that currently meet the criteria are shown on Map M-42. Future lands meeting these criteria may also be designated.

IV. MINERAL RESOURCES

Community Vision: The citizens of Thurston County recognize mining as an important part of the rural economy. Mineral resources such as sand and gravel supply materials for road maintenance and construction projects throughout the region. The community seeks a balance between the need for mineral resources and the need to protect the environment and the community from adverse impacts of mining. Good stewardship of mining operations, including reclamation and restoration, takes a partnership among mining operators, county citizens, and regulatory agencies.

Background: As a result of major glacial activity in Thurston County's geologic past, major deposits of sand and gravel are located in Thurston County. This geologic heritage provides the raw material for dozens of sand and gravel operations throughout the county. The deposits are perhaps doubly significant considering their proximity to major population areas and construction projects that use sand and gravel. Although rich in sand and gravel, the County has relatively few areas of high quality basalts in the County used in construction activities.

Another significant area of mining activity is the Centralia coal mine on the county's southern border with Lewis County. This is an "open pit" mine which supplies the Centralia Steam Plant with coal. Unlike many open pit mines of the past which remain as open scars on the earth, the Centralia mine sets the industry standard for reclamation and minimizing environmental damage. Land that was mined ten years ago now supports a mixed forest of fir and alder, and several wetlands.

Balancing conflicts: The extraction process does pose potential conflicts with surrounding uses, particularly rural residential uses and critical areas. During the process of designating resource lands of long-term commercial significance, the county evaluates the location and value of the resource as well as its proximity to existing residential areas (see below). For permitting new mining activity, the county considers groundwater protection, air quality impacts, hazards posed by gravel truck travel, and residential densities surrounding the mine, among other concerns. In response to these concerns, the county implements conditions and BMPs through the Special Use Permit process to ensure that mining operations are in keeping with public health and safety and environmental protection. Just as sand and gravel is a natural resource, so too is the groundwater and air quality the county depends on. The policies provide that generally, mining should minimize adverse impacts on the environment, and specifically, should minimize its effect on surface and groundwater and air quality.

The policies also specify that mineral extraction sites should be restored as mining occurs. Existing, non-operating or abandoned mining sites pose a concern to many county residents because they may leave aquifers vulnerably exposed, and invite illegal waste dumping. The action recommendations also seek to address the problem of these non-operating sites.

The policies recognize the necessity for mineral extraction to be located in rural areas of the county with low population densities or in industrial-zoned areas. The movement of large amounts of mineral resource necessitates good roads capable of handling significant numbers of heavily-loaded trucks. Loaded trucks en route from the extraction site may lose a very small but potentially hazardous portion of their load, and track dirt or mud onto public roadways. Therefore, the policies also respond to the need for better prevention of such mining impacts on county residents.

Designating Mineral Resources of Long-Term Commercial Significance: Section 17 of the Growth Management Act states that "...each county...shall designate where appropriate...mineral resource lands that are not already characterized by urban growth and that have long-term significance for the extraction of minerals." The Act defines "minerals" as gravel, sand, and valuable metallic substances. Other minerals may be designated as appropriate. Section 6 of the Act states that "...each county...shall adopt development regulations...to assure the conservation of...mineral resource lands designated under Section 17 of this Act."

Within Thurston County, minerals of potentially long-term commercial significance include sand and gravel deposits, coal deposits (Centralia mine), and a few rock resources, such as columnar basalt (shot rock) and sandstone. Basalt "shot rock" is important for highway construction and flood control (rip rap), and the sandstone quarries at Tenino have provided valuable building material for the State Capitol and other structures around the County. There are no known valuable metallic minerals within the County.

Protecting these mineral deposits of long-term commercial significance for mining use is an important goal of the policies, as is preventing residential and other incompatible uses from locating adjacent to these deposits. The county recognizes that a mining operator's hauling distance to the resource user is an important factor to its economic viability. However, the policies also provide that mining activity should not encroach on existing residential uses nor adversely affect the environment. In addition, significant geologic features, including mima mounds, should not be used for mining purposes. Additional significant geologic features may be identified by future study. Prime and unique farmland (as defined by the Natural Resources Conservation Service) should not be used for mining purposes unless they can be restored to their original production capacity as mining occurs.

To determine the location of mineral resource lands of long-term commercial significance, the County applies the criteria in the Washington State Department of Community, Trade and Economic Development's (CTED) "Minimum Guidelines to Classify Agriculture, Forest, Mineral Lands, and Critical Areas." Based on the CTED Guidelines, the County has

developed the following criteria to designate mineral resource lands of long-term commercial significance.

1. Mineral Deposits. Existing deposits consist of sand and gravel, coal, sandstone, basalt, or other igneous rock, based on U.S. Geological Survey maps or site-specific information prepared by a geologist, or as indicated by State Department of Natural Resources (DNR) mining permit data.
2. Location. Mineral resource lands are located outside public parks and preserves, and at least 1,000 feet from urban growth areas and rural residential areas with existing densities predominantly one dwelling unit per five acres or higher, in order to minimize land use conflicts during the long-term operation of the mine.
3. Minimum Area Width. The minimum area width is 500 feet for sand and gravel, coal, and basalt, which allows for 100-foot setbacks and a 300-foot width for the working site and reclamation.
4. Marketability. Mineral resource lands contain non-strategic minerals which are minable, recoverable and marketable in the present or foreseeable future (50 years).
5. Minimum Value. The resource value over the life of the mine must exceed certain thresholds. The minimum threshold values in 1990 equivalent dollars are as follows:
 - a. Construction materials: \$5,000,000.
 - b. Quarried rock: \$1,000,000.
 - c. Industrial and chemical mineral materials: \$1,000,000.
 - d. Metallic and rare minerals: \$500,000.
 - e. Non-fluid mineral fuels: \$1,000,000.

Mining operations meeting the above criteria, and which have all legally required permits at the onset of the extraction operation are designated as long-term commercially significant. Mining operations that meet the criteria above may apply for designation status concurrently with application for a Special Use Permit under the Zoning Ordinance. In addition, the County may, through a Comprehensive Plan Amendment process, designate additional mineral lands of long-term commercial significance without requiring an active Special Use Permit. This type of designation does not consider site-specific environmental impacts, which are reviewed at the permitting stage. Such designation does not guarantee or forecast that a permit for mineral extraction will be granted. Such designation should not be used as a basis for granting a special use permit. Mine operators must go through all required review and permitting prior to beginning any mining activity on designated land. Map M-43 identifies the mining sites meeting the designation criteria, although this map is

provided for reference only. An updated map of designated mineral resource lands of long-term commercial significance is the "Official Designated Mineral Resource Lands" map accompanying the official zoning map, available at the Development Services Department. This map is immediately updated following approval of a new designated site.

Long-term commercially significant (designated) mineral deposits should be conserved for long-term resource extraction. To this end, the following measures should be implemented:

- Resource use notice to new developments within 1,000 feet of designated mineral lands, informing prospective property owners of the long-term resource use nearby; and
- Limit private nuisance claims against operators of designated mines when certain conditions are met.

These measures are intended to assure that the use of lands adjacent to designated mineral lands shall not interfere with the continued use, in accordance with best management practices (BMPs), of the designated lands for mineral extraction.

V. GOALS, OBJECTIVES AND POLICIES

GOAL 1: AGRICULTURE LAND SHOULD BE PRESERVED IN ORDER TO ENSURE AN ADEQUATE LAND BASE FOR LONG-TERM FARM USE. (This applies to all agricultural land)

OBJECTIVE A: Agriculture lands should be conserved and enhanced for long-term farming use.

POLICIES:

1. Residential uses adjacent to farms should be developed in a manner which minimizes potential conflicts and reduces unnecessary conversion of farmland. The use of "cluster" development patterns should not result in increased density adjacent to existing farms, and should ensure that resource use parcels intended for agricultural use can be reasonably farmed.
2. Commercial farmland owners should be encouraged to retain their lands in commercial farm production and enroll their land in the Open Space- Farm and Agriculture Tax Program.
3. In order to reduce development pressure from the farm and rural areas, future development should be directed toward designated growth areas where existing and planned services can more easily accommodate growth. Outside these growth areas, densities should remain low.
4. Agricultural lands within the Nisqually Valley should be given a high priority for protection by means specially suited to the Valley's unique characteristics. Agricultural lands within the Nisqually Sub-Area should be protected from the encroachment of existing and potential residences within the valley and along the adjacent wooded hillsides.
5. The County should continue to develop innovative strategies for the conservation of farmland. Strategies such as rural cluster subdivisions, purchase of development rights, and transfer of development rights should continue to be implemented throughout the county.

ACTION NEEDS FOR OBJECTIVE A:

1. *Strategies aimed at recognizing the importance of farming in rural areas, including farms located outside designated agricultural lands, should also be considered. This may include placing signs along roads warning drivers about farm equipment on roadways in farming areas.*

2. *Recognizing the importance of farmland conservation and local food production in maintaining the quality of life and long-term sustainability of the community, the county should create a Purchase of Development Rights (PDR) Program using conservation futures funds for important agricultural lands throughout Thurston County. The Thurston County Agriculture Advisory Committee should take the lead in creating a PDR strategy.*
3. *Maintain a register of farmland owners interested in participating in development rights programs.*
4. *The impacts of cluster development on agricultural lands should be studied to ensure that clustering is achieving the intended benefits of minimizing impacts to resource industries and enhancing rural character.*

OBJECTIVE B: Full utilization of the county's agricultural resources by farmers should be encouraged.

POLICIES:

1. The county should encourage the schools and the media to provide more information on the special problems, potential, and importance of agriculture to all citizens.
2. The county should work with community groups to support the continued viability of agriculture and encourage community support for it.

ACTION NEEDS FOR OBJECTIVE B:

1. *Encourage community efforts to support local agriculture, including continued support for the Agricultural Advisory Committee , Thurston County Fair, farmers markets, WSU-Cooperative Extension and the Thurston Conservation District.*

OBJECTIVE C: Provide regulations that are supportive to long-term agricultural use.

POLICIES:

1. Farmers often need to work with a variety of federal, state, and local government regulations and agencies. Thurston County staff should be trained to assist farmers in working their way through this often time-consuming and complex process.
2. Noxious weeds pose a significant economic threat to agriculture. The County Noxious Weed Control Board should have the opportunity to recommend control options as part of their integrated pest management program in accordance with the proposed Ground Water Management Plan, the Thurston County Pest and Vegetation Management Policy, and any other applicable county policies.

3. . Thurston County shall not be precluded from regulating agricultural chemicals if adequate protection of the resources and public health are not being met by existing regulatory agencies.
4. Within Thurston County, farmers should be given protection from nuisance claims in accordance with State law.
5. The County should continue to work with flood agencies and neighboring jurisdictions to address ongoing flooding problems of the Chehalis River and other areas that adversely affect agricultural operations.

ACTION NEEDS FOR OBJECTIVE C:

1. *Provide training and education to county permitting staff on agricultural issues and regulations to ensure consistent interpretation and application of rules affecting agriculture. County staff should assist farmers with meeting regulatory requirements.2. Provide the Agriculture Advisory Committee the opportunity to comment on development and regulatory proposals that could adversely impact agriculture. Evaluate the impact of new regulations on agriculture to be sure they do not threaten a continued agriculture industry in Thurston County.*
3. *If administratively feasible, expand the resource use notice (see below) provision to all farms enrolled in the Open Space Tax Program. This provision should only be implemented if notices can be generated automatically via computer, and would not require additional staff resources to administer.*

GOAL 2: AGRICULTURAL LAND OF LONG-TERM COMMERCIAL SIGNIFICANCE SHOULD BE CONSERVED.

OBJECTIVE A: Agriculture lands of long-term commercial significance should receive the highest priority for conservation.

POLICIES:

1. Designated agricultural lands should be zoned at very low densities to ensure the conservation of the resource for continued agricultural use.
2. Non-agricultural development within designated agricultural areas should be limited to non-prime farmland soils where possible.

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3. Non-agricultural development within designated agricultural areas should be compactly developed, in order to conserve the largest area possible for continued agricultural use.
4. The county discourages the establishment or expansion of local improvement districts, utility local improvement districts, or sewer, water or public utility districts into designated agricultural areas of long-term commercial significance.
5. Except within urban growth areas, land uses that are adjacent to long-term commercial agriculture areas should be of compatible use, such as sawmill operations, warehousing, agri-businesses, and low density residential.
6. Adequate water rights should be reserved for designated agricultural land of long-term commercial significance.
7. The designation of agricultural land of long-term commercial significance should be reevaluated if changes in surrounding land use or farming economics create severe losses lasting several years, covering a wide range of crops or products, and affect a majority of the producers in the area.
8. A resource use notice should be placed on any new subdivision or residential building permit located within 500 feet of designated agriculture land of long-term commercial significance, which states that a variety of commercial agricultural activities may occur that may not be compatible with residential development. The notice should also state that a person's right to recover under a nuisance claim against agricultural activities may be restricted.

ACTION NEEDS FOR OBJECTIVE A:

1. *The County should study the problem of water rights for lands designated as long-term commercially significant, and adjust designations or policies to ensure that lands intended for long-term agricultural use have the water supply necessary for this use.*

OBJECTIVE B: Programs should be provided that help farmers of agricultural land of long-term commercial significance to realize the capital from the land's development potential without converting it to non-agricultural uses.

POLICY:

1. Transfer of Development Rights (TDR) and Purchase of Development Rights (PDR) programs should be utilized as economic incentives for farmers to stay in agriculture.

ACTION NEEDS FOR OBJECTIVE B:

1. *Continue implementation of the Transfer of Development Rights program by educating eligible farmland owners about the program and encouraging the cities and towns to maintain receiving areas and provide incentives for application of transferred development rights.*
2. *Maintain consistency in determining the number of development rights to be credited to farmland owners under PDR and TDR programs (1 right per 5 acres).*

GOAL 3: AQUACULTURE GROWING AREAS SHOULD BE PROTECTED AND PRESERVED IN ORDER TO ENSURE AN ADEQUATE RESOURCE BASE FOR LONG-TERM USE.

OBJECTIVE A: The county should provide land use and water management programs to conserve and enhance commercial marine aquaculture areas and land based aquaculture for long-term economic use.

POLICIES:

1. Impacts to shellfish growing areas classified for harvest by the Department of Health should be addressed throughout County ordinances.
2. Uses of lands that are near designated marine aquacultural areas should be compatible, such as forestry and low density rural residential. Those uses should not increase stormwater runoff or otherwise degrade water quality for aquacultural use.
3. Facilities for land based and marine aquacultural operations should be protected from incompatible adjacent or nearby land uses.
4. Land based and marine aquacultural activity should not be considered a nuisance if carried out in a reasonable manner and within applicable regulations. Restrictions should not be imposed on aquacultural activities unless they are necessary for preserving the public health, welfare, and safety.
5. Proposed residential and other uses in aquacultural areas should be developed in a manner that minimizes potential conflicts with aquaculture operations.
6. Aquacultural activities should be undertaken in a way that minimizes adverse impacts, such as views from upland property and general environmental quality.

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7. Aquacultural operations that draw on ground water supplies should not degrade the quality nor substantially reduce the quantity of ground water.
8. Water quality in the county's marine and inland waters, and ground water in the county should be protected from degradation. Degraded waters should be restored within the drainage basins of designated commercial marine aquaculture areas, or areas of significant recreational shellfish harvesting.
9. Landowners in drainage basins feeding aquaculture growing waters should be eligible for the Open Space Tax Program, if they undertake conservation measures to protect water quality.

ACTION NEEDS FOR OBJECTIVE A:

1. *Regulations affecting shoreline development, critical area protection, public health and water quality should be reevaluated and improved to preserve the ability of commercial and recreational harvesters to use the shellfish resource. County ordinances should be updated as new information on shellfish protection becomes available as a result of Shellfish Protection District and state agency studies.*
2. *The County, in cooperation with the Washington State Department of Health, should continue regular, ongoing water quality monitoring of marine waters, watersheds and groundwater.*
3. *The County, in cooperation with the Thurston Conservation District, WSU-Cooperative Extension, and other agencies, should implement education programs for residents of watersheds draining into shellfish growing areas classified by the state Department of Health. Such education should focus on how to reduce land use activities that threaten downstream shellfish harvest areas.*

RELATIONSHIP TO THE SHORELINE MASTER PROGRAM:

The Shoreline Master Program is the county document which governs development on the shorelines in compliance with the State Shoreline Management Act (RCW 90.85). Within the master program there are policies and regulations relating to aquaculture. The Comprehensive Plan goals, objectives and policies are intended to complement those in the master program; both documents should be consulted in reference to developing in the shoreline area.

GOAL 4: FOREST LANDS SHOULD BE CONSERVED IN ORDER TO MAINTAIN A VIABLE FORESTRY INDUSTRY WHILE PROTECTING ENVIRONMENTAL VALUES.

OBJECTIVE A: Forest lands should be conserved and enhanced for long-term economic use.

POLICIES:

1. Residential development adjacent to forestry uses should occur in a manner which minimizes potential conflicts and reduces unnecessary conversion of forest land through use of such mechanisms as clustering, buffers, etc.
2. The county supports and encourages the maintenance of forest lands in timber and current use property tax classifications consistent with RCW 84.28, 84.33 and 84.34.
3. Within Thurston County, forest practices should be given protection from nuisance claims in accordance with state law.
4. The county should provide outreach and information to forestland owners about county regulatory and permitting processes.
5. Conservation futures funds should be used to purchase development rights from willing forest landowners to preserve the resource for future generations.

ACTION NEED FOR OBJECTIVE A:

1. *Continue to publicize and encourage enrollment in the Open Space-Timberland Designated Forest tax programs.*
2. *Provide training opportunities for staff to learn about forest landowner issues, and to ensure consistent interpretation of regulations applicable to forest lands.*
3. *Explore the use of county funds to purchase development rights from willing forest landowners to encourage continued tree farming.*
4. *The County should work with the Department of Natural Resources to create an informational handout on state and county permitting requirements for forest landowners.*
5. *If administratively feasible, expand the resource use notice (see below) provision to all forest lands enrolled in the Designated Forest or Open Space-Timber Tax Program. This provision should only be implemented if notices can be generated automatically via computer, and would not require additional staff resources to administer.*

OBJECTIVE B: Provisions should be made for forest lands to accommodate public recreation and conservation of fish and wildlife habitats, scenic vistas, and nearby property values.

POLICIES:

1. Public trails, camping facilities, and other low intensity recreation uses are encouraged in forest lands.
2. The county endorses the concept of cooperative resource management as developed in the Timber, Fish and Wildlife agreement, which is an agreement among industrial timber landowners, environmental groups, state resource agencies, and Indian tribes for managing the state's public and private timber lands and public resources.
3. Some mature forest stands should be purchased in the metropolitan fringe areas of the county for their historic and aesthetic values for parks and other recreational uses, unless they are designated as forest lands of long-term commercial significance.
4. When timber harvesting is for conversion to other uses, the county should ensure that harvesting is done in a manner compatible with land uses of the surrounding area and maintenance of water quality, environmentally sensitive features, and fish habitat.
5. Owners of forest lands planned for conversion to another use should provide buffers between their property and adjacent forestry uses.
6. Forestry activities should not alter wetlands or stream corridors.

ACTION NEEDS FOR OBJECTIVE B: *None.*

GOAL 5: FOREST LANDS OF LONG-TERM COMMERCIAL SIGNIFICANCE SHOULD BE CONSERVED IN ORDER TO ENSURE AN ADEQUATE LAND BASE AND DISCOURAGE INCOMPATIBLE USES.

OBJECTIVE A: Forest lands of long-term commercial significance should be conserved for productive economic use.

POLICIES:

1. The primary land use activities in forest lands of long-term commercial significance should be commercial forest management, agriculture, mineral extraction, accessory uses, and other non-forest related economic activities relying on forest lands.
2. Land use activities within or adjacent to forest lands of long-term commercial significance should be sited and designed to minimize conflicts with forest management, and other activities on forest land.
3. Commercial forest land considered desirable for acquisition for public recreational, scenic and park purposes should first be evaluated for its impact on a viable forest industry and local government revenue and programs.
4. The county discourages the establishment or expansion of coal improvement districts, utility local improvement districts, or sewer, water or public utility districts in lands designated as long-term commercial significance which result in the imposition of assessments, rates, or charges on designated forest land.
5. Clustering of residential development on adjacent rural lands is encouraged. The open space in clustered development should be adjacent to the forest lands of long-term commercial significance.
6. The county should encourage the continuation of commercial forest management by supporting land trades that result in consolidated forest ownerships and are in the public interest.
7. The county should encourage the continuation of commercial forest management by working with forest managers to identify and develop other incentives for continued forestry.
8. Subject to any state or local regulation of critical areas, the county encourages the multiple economic use of forest land for a variety of natural resource and other land use activities particularly suited for forest lands because of physical and topographical characteristics; remoteness from populated areas; availability of water supplies; the quality of the forest environment; or where the efficient provision of statewide or regional utilities, energy generating and/or transmission facilities, or public facilities require access across or use of such forest lands.
9. Designated forest lands of long-term commercial significance should be protected from nuisance claims from neighboring development through a resource use notice placed on any new subdivision or residential building permit located within 500 feet. The notice should state that a variety of forestry activities may occur that may or may not be compatible with residential development, and a person's right to recover under a nuisance claim against forestry operations may be restricted.

ACTION NEED FOR OBJECTIVE A: *None.*

GOAL 6: RURAL FOREST LANDS ENROLLED IN A CURRENT USE TAX ASSESSMENT PROGRAM SHOULD BE PROTECTED FROM PRESSURES TO CONVERT TO OTHER USES.

OBJECTIVE A: Provide measures to protect owners of rural forest lands from development pressures.

POLICIES:

1. Development regulations should accommodate and encourage clustering of residential development on rural lands adjacent to rural forest lands. The open space in clustered development should buffer rural forest land from development.
2. Land use activities adjacent to forest land in rural areas should be sited and designed to minimize conflicts with forest management and other permitted activities on forest land.

ACTION NEEDS FOR OBJECTIVE A:

1. *The County should study the impacts of cluster development on forest lands to ensure that clustering is achieving the intended benefits of minimizing impacts to resource industries and enhancing rural character.*

GOAL 7: MINERAL RESOURCE LANDS OF LONG-TERM COMMERCIAL SIGNIFICANCE SHOULD BE ALLOWED TO BE USED BY EXTRACTION INDUSTRIES, WITH MINIMAL HARM TO THE ENVIRONMENT.

OBJECTIVE A: The county should provide regulatory mechanisms that balance and minimize the conflicts between extractive industries, other land uses, and general environmental concerns.

POLICIES:

1. Mineral extraction industries should be allowed to locate where prime natural resource deposits exist.
2. Designated mineral resource lands of long-term commercial significance should be conserved for mineral extraction, and the use of adjacent lands should not interfere with the continued use of the designated mining sites that are being operated in accordance with applicable best management practices and other laws and regulations.

3. Designated mineral resource sites that are being operated in accordance with applicable best management practices and other laws and regulations should be given increased protection from nuisance claims from landowners who have been notified of the presence of the long-term mineral extraction site.
4. Restoration of mineral extraction sites should occur as the site is being mined. The site should be restored for appropriate future use and should blend with the adjacent landscape and contours.
5. Prime and unique farmland (as defined by the Natural Resources Conservation Service) should not be used for mineral or soil mining purposes unless they can be restored to their original production capacity as mining occurs.
6. New residential uses should be discouraged from locating near prime designated mineral deposit sites until mineral extraction is completed unless adequate buffering is provided by the residential developer.
7. Extraction industries should not adversely impact adjacent or nearby land uses, or public health and safety.
8. Proposed mining activities should not alter significant geologic features such as mima mounds.
9. Areas where existing residential uses predominate should be protected against intrusion by mineral extraction operations.
10. Mineral extraction activities should not negatively affect nor endanger surface and ground water flows and quality.
11. County information on the location and quality of mineral resource deposits should be updated according to new information provided by the Department of Natural Resources. This information can be useful in planning for future designations of mineral resource lands of long-term commercial significance.

ACTION NEEDS FOR OBJECTIVE A:

1. *Periodically review designated mineral resource lands and identified prime mineral deposits based on new information from the Department of Natural Resources, Thurston County, and other scientific sources. Work with citizens, DNR, and mineral operators in the designation and conservation of future mineral resource lands of long-term commercial significance.*

2. *The County should provide the necessary staff resources to regularly monitor all mines for compliance with the Mineral Extraction Code, as called for in the regulations.*
3. *The County should consider raising annual registration fees for mines in order to cover monitoring costs.*
4. *Define and identify significant geologic features that should not be altered by mining activities.*
5. *Investigate the problems associated with non-operating and non-permitted mining sites and work with the appropriate state agencies to resolve such problems.*
6. *Work with mineral extraction operators in the county to develop a "good neighbor" relationship, for example, by encouraging operators to voluntarily provide a resource use notice to nearby landowners*
7. *Change the resource use notice provision to apply to building and development permits within 1,000 feet of designated mineral lands. Consider expanding this noticing provision to additional properties if warranted by the Special Use Permit conditions.*
8. *In order to ensure maximum protection of public health and safety and the environment, the County should conduct further studies on the health impacts of mining and accessory uses, including asphalt plants and concrete plants, the creation of lakes from mining operations, and other impacts to sensitive areas located near mining sites. Future designations of mineral lands should take this information into account.*
9. *The County should reevaluate the minimum setbacks from residential areas required by the Mineral Extraction Code to ensure adequate protection of public health and safety.*