

Chapter Eight Resource Lands

Introduction

The growth and harvest of farm products, re-generation and harvesting of timber, use of marine resource lands for shellfish harvest, and excavation of minerals all shape Whatcom County's landscape and strongly influence the economy. Resource lands, which include agriculture, forestry, fisheries (RCW 36.70A.020), and mineral resource lands, also largely represent Whatcom County's cultural heritage. These natural resource activities have been major industries since European settlement began in the area, and the use of marine lands by our indigenous citizens far predates European settlement.

Chapter Organization

This chapter is divided into four sections: Agricultural Lands, Forest Resource Lands, Marine Resource Lands, and Mineral Resources.

Purpose

This chapter contains goals and policies designed to identify and protect the important natural resource lands found in Whatcom County as defined by RCW 36.70A. The development of these goals and policies is necessary to ensure the provision of land suitable for long-term farming, forestry, and mineral extraction so the production of food, fiber, wood products, and minerals can be maintained as an important part of our economic base through the planning period. Without protection of these resource lands, some of the lands could be inappropriately or prematurely converted into land uses incompatible with long-term resource production. The premature conversion of resource lands into incompatible uses places additional constraints on remaining resource lands and can lead to further erosion of the resource land base.

Process

Each section of this chapter includes a description of the process followed in creating that section.

GMA Goals and Countywide Planning Policies

The following goals and policies in this chapter have been developed:

- to be consistent with and help achieve the statewide GMA goals to "maintain and enhance" natural resource based industries
- to implement Countywide Planning Policies that express the desire for the county to become a government of rural lands and sustainable resource based industries
- to fulfill the citizens' vision of Whatcom County where resource based industries are widely practiced and encouraged

The Agricultural Lands, Forest Resource Lands, Marine Resource Lands, and Mineral Resources sections of this chapter address Goal 8 of the GMA, which reads:

"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." (RCW 36.70A.020)

The goals, policies, and action plans of this chapter support the achievement of this goal by identifying, designating, and protecting productive resource lands from incompatible uses, thereby helping to maintain the county's important natural resource based industries.

Identifying and designating productive resource lands also helps implement the Countywide Planning Policies directed towards agriculture, forestry, mineral resources, marine industries, and other natural resources. In addition, land use policies that encourage best management practices are included within this chapter to support and maintain a broad based economy of productive timber, agriculture, mineral and aquatic industries in a sustainable manner. (CWPP I-9)

Agricultural Lands

Introduction

Purpose

The purpose of this section is to provide a clear set of guidelines that preserves the agricultural base in Whatcom County, prioritizes the human need for food, fiber, shelter and energy and ensures both the agricultural industry and the cultural heritage thrive in the years to come.

Process

In 1991 an Agricultural Resource Land Advisory Committee was formed to adopt Agricultural Resource Land Designations under the GMA. After 13 committee meetings and three public information meetings, the committee recommended adoption of refined goals and objectives and re-adoption of the existing Agriculture zoning and plan designations. Their recommendation was adopted by Council through Ordinance 92-013 Exhibit A to Ordinance 92-013 explains the locational criteria that were used to designate agricultural lands. The revised criteria are now found in Policy 8A-3.

Currently, approximately 86,000 acres are designated as agricultural lands of long-term commercial significance.

GMA Requirements

The Growth Management Act requires the identification of the "general distribution and general location and extent of the uses of land... for agriculture..." **Map 8-1** and **Map 8-2** show agricultural soils and existing agricultural zoning boundaries.

Map 8-1 shows prime agricultural soils, and the Agricultural Comprehensive Plan designation. Those lands designated as Agriculture in the comprehensive plan are designated as Agricultural Lands of Long-Term Commercial Significance as defined by GMA as agricultural lands that have the growing capacity, productivity, and soil composition of the land for long-term commercial production, in consideration with the land's proximity to population areas, and the possibility of more intense uses of the land." (RCW 36.70A.030(10).

Prime farmland, as defined by the Natural Resources Conservation Service (NRCS), "is the land that is best suited to food, feed, forage, fiber, and oilseed crops." Categories of prime soils depicted on **Map 8-1** are described as follows:

- Category I: All areas are prime farmland.
- Category II: Prime farmland if drained.
- Category IV: Prime farmland if irrigated.
- Category V: Prime if drained and protected from flooding or not frequently flooded during the growing season.
- Category VII: Prime if irrigated and either protected from flooding or not frequently flooded during the growing season.
- Category VII: Prime if subsoiled, completely removing the root inhibiting soil layer.

These prime soil categories are taken directly from the NRCS National Soil Survey Handbook Part 622. Whatcom County does not contain all NRCS categories of prime soils.

Map 8-2 shows Agriculture Protection Overlay soils, and provides a visual representation of those areas that are subject to the Agriculture Protection Overlay (APO). The APO recognizes that agriculturally important soils may lie outside existing agricultural zoning, in designated rural areas, and provides a mechanism for conserving these soils for agricultural use, if conservation is appropriate. Soils were classified as APO soils based on the NRCS's Prime Farmland classification system and Land Evaluation and Site Assessment (LESA) system.

The purpose of the APO is to promote and encourage commercial agricultural activity, meet long-term agricultural needs not otherwise met in the Agriculture zone district, provide a reasonable mix of uses and activities that may enhance the economic resources available to the farmer, and provide for a variety of uses within the rural areas that are not inconsistent with or incompatible with the use of lands within these areas for agricultural activities.

Conserving productive agricultural lands in rural areas is a primary objective of the APO. The APO applies to all lands zoned Rural-5A or Rural-10A that are outside designated urban growth area boundaries and held in parcels of 20 acres or larger.

Map 8-2 shows lands zoned Rural-5A or Rural-10A that are outside UGAs. Applied at the time of subdivision, the APO uses cluster zoning in order to allow development on one portion of a parcel, while leaving the remainder of the parcel available for agricultural use. The portion available for development will be limited to 20 percent (or possibly, up to 30 percent).

The APO seeks to conserve lands, with agriculturally important soils, whose predominant use has been and continues to be, or could be commercial agriculture. This overlay zone shall include areas that:

1. Have been designated as agricultural open space for county property tax purposes within the past seven years; and/or
2. Those that include more than 50 percent APO soils;

GMA also specifies the need for regulatory protection relative to agriculture. It requires that the county "shall adopt development regulations on or before September 1, 1991, to assure the conservation of agricultural, forest, and mineral resource lands . . ." Whatcom County has enacted a Right-To-Farm ordinance that meets this requirement.

Background Summary

Today agriculture plays an important role in both Whatcom County's economy and its identity.

Whatcom County agriculture is widespread and diverse, ranging from small, organic farms in the Mt. Baker Foothills to cold-storage facilities in Bellingham, and includes orchards, dairies, cattle ranches, produce farms, and nurseries, to name a few. Our farms are the country's top producers of red raspberries and are also major producers of milk, beef, blueberries, potatoes, nursery products, and many other agricultural commodities.

The economic impacts of agriculture on Whatcom County are substantial. According to the U.S. Department of Agriculture's 2012 Census of Agriculture, 1,483 Whatcom County farms produced a market value of \$326 million in crops and livestock that year, ranking eighth in the state. Milk produced locally in 2013 reached an all-time high market value of \$246.1 million. Raspberries and blueberries combined for a record market value of \$123.6 million in 2014.

Average annual agricultural employment in Whatcom County in 2014 was 3,512, with substantial seasonal variation within that average, according to the Washington State Employment Security Department. Locally, agricultural jobs soared to 5,661 in the third quarter of 2015. In addition, farms and support businesses, such as equipment retailers, veterinarians, processing facilities, and feed suppliers employ many Whatcom County residents.

Agricultural activity is generally considered to be a condition or activity which occurs on agricultural land in connection with the commercial production of agricultural products. Agricultural land may include, but not be limited to the land, freshwater ponds, buildings, infrastructure and machinery used in the commercial production of agricultural products. Agricultural products are those plants and animals useful to humans. Commercially viable agricultural products require generally rich and fertile soil with appropriate amounts of water to bring them to a harvestable stage.

Agricultural lands are an important resource to the people of Whatcom County and Washington State yet if not adequately protected through zoning and other measures, these lands may be converted to urban or rural uses. Often the

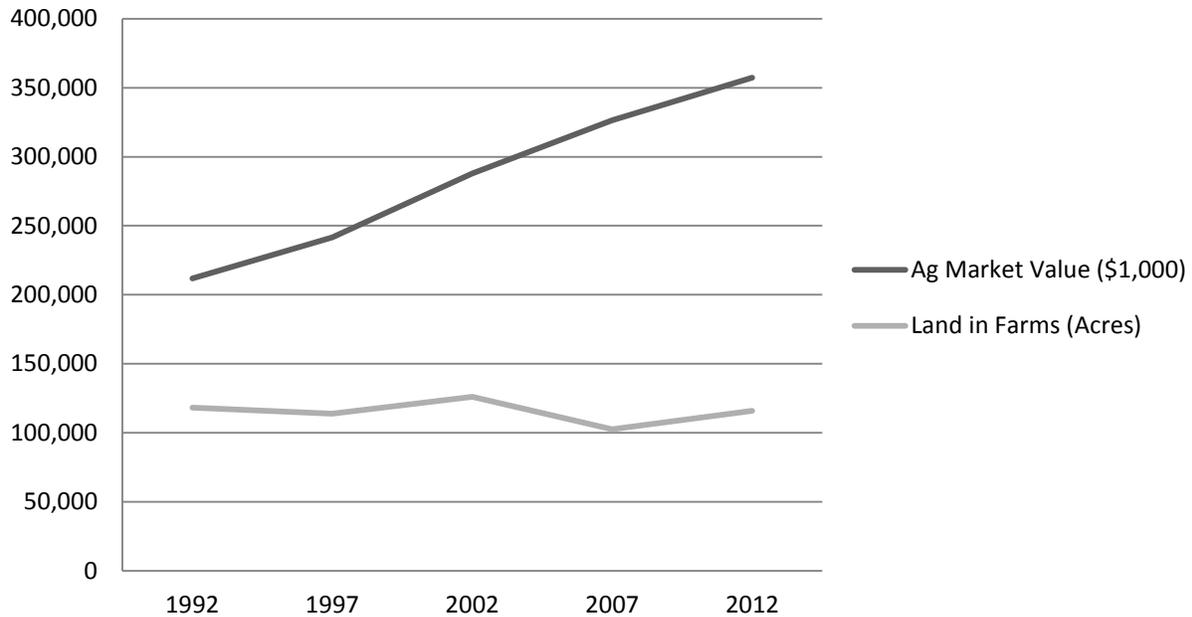
conversion process begins when rural uses move onto agricultural land, creating smaller parcels, more buildings, and activities that, in some cases, are incompatible with agriculture. In many cases, this blurs the line of distinction between agriculture uses and other uses and sets the stage for further conversion of the limited agricultural land base in Whatcom County.

The viability of an agricultural resource economy is dependent upon the presence of certain agriculture related industries and activities. These include processors (for example, fruit and vegetable packers and milk processors in Whatcom County), farm implement sales and repair, fertilizer and pesticide suppliers, trucking firms, certified meat inspectors and processors, a pool of farm labor, etc. These activities, in turn depend on a stable (or expanding) agricultural products economy that is in turn dependent on maintaining a stable agricultural resource land base. If agricultural production is reduced below a certain level in a given geographical area, then it becomes no longer economical for the agriculture related activities to remain in that area. Loss of these support industries results in further reduction and conversion of the agricultural land base and an accelerating downward spiral for the local agricultural economy.

Another important consideration is maintaining a large contiguous land base without a significant potential for conversion to non-agricultural residential uses for agriculture. Smaller, discontinuous agricultural areas are more vulnerable to conversion pressures resulting from longer hauling routes, difficulty in transporting farm equipment and supplies on roads dedicated to residential traffic, conflicts with neighboring non-agricultural land uses, and the reduced importance of agriculture in the local economy. Maintaining such a large contiguous land base sometimes requires preserving within the agricultural resource land area some lands that are not well suited to actual production of crops. Such inclusions may best be used for building sites, windbreaks, specialty crops, livestock wintering, forestry, etc. Thus it is important to consider both the size and the configuration of the agricultural resource area to provide long term stability of the agricultural resource and support industry economy.

In 1949, 200,000 acres of land were reported to be in farm production in Whatcom County. Between 1949 and 1992, land in farm production declined. In 2012, agriculture accounted for 115,831 acres, nearly 85,000 fewer acres than 1949. However, since 1992, the amount of land in farms has remained relatively stable (between 100,000 and 125,000 acres). But at the same time, both the number and diversity of farms in the County has been increasing. Even while the amount of land in agricultural use has remained relatively stable over the past two decades, the economic value of the products produced on those farms has increased by more than \$100 million in the same time period.

Whatcom County Land in Farms/ Product Market Value Over Time



Issues, Goals, and Policies

Agricultural Land Base

The state legislature has recognized that agriculture faces unprecedented international market competition and costs. Low profit margins have contributed to the decline of Whatcom County’s agricultural land base from 1949 to 2012. The continued loss of working agricultural land also harms critical areas because, as the Puget Sound Partnership has noted, farm and cattle ranch lands can deliver critical area outcomes that can be superior to converted lands, in terms of water quality functions, floodplain, aquifer recharge, and food and habitat functions for fish and wildlife species. Because of this, additional regulations need to be carefully tailored to prevent additional threats that can accelerate conversion to non-agricultural uses.

Agricultural viability is dependent upon long-term supplies of clean water and a large fertile land base. Erosion of the farm land base has been recognized as a national and local problem. The maintenance of a sufficiently large land area devoted to agricultural activity is necessary to support associated farm processing operations such as milk and berry processing facilities.

Demand for low cost residential building sites coupled with fluctuating profit margins for agricultural operations and availability of residential development rights brings pressure to convert agricultural land to residential and other non-agricultural uses.

Whatcom County passed Resolution 2009-040 on July 7, 2009 in which the County Council confirmed that 100,000 acres of land available for agricultural use is the minimum goal for ensuring a land base necessary to support a viable agricultural industry in Whatcom County. The resolution also stated the need to strengthen agricultural land protection in the County’s Rural Study Areas as defined in the 2007 Rural Land Study by the Agricultural Advisory Committee (AAC). The AAC assisted in the creation of the County’s Agricultural Strategic Plan in 2011, which included the task of reviewing rural study areas and identifying any new agricultural zoning designations or where agricultural land protection efforts should be strengthened.

Goal 8A: Conserve and enhance Whatcom County's agricultural land base for the continued production of food and fiber.

Policy 8A-1: Conserve productive agricultural lands and agricultural resource lands, including areas with prime soils that are not now zoned agriculture, or where the area is composed of agricultural operations that have historically been and continue to be economically viable, by developing and implementing a long range strategy. The planning horizon should be twenty years in the short-term and 100 years in the long-term.

Policy 8A-2: Maintain a working agricultural land base sufficient to support a viable local agricultural industry by considering the impacts to farmers and agricultural lands as part of the legislative decision making process. Measures that can be taken to support working farms and maintain the agricultural land base should include:

- Maintenance of 100,000 acres of agricultural land to support a healthy agricultural industry.
- A density credit program where development incentives are offered in cities and/or UGAs if density credits are purchased by the developer. Funds from the density credit program would supplement the existing Conservation Easement Program funding.
- Developing a marketplace approach to strengthening agricultural practices while enhancing larger-scale watershed processes and functions by identifying feasible opportunities on agricultural land to improve both watershed health and agricultural viability and developing incentives and tools to compensate farmers for actions that exceed minimum regulatory standards.
- Maintaining a Conservation Easement Program that facilitates the removal of development rights from productive farmland and provides permanent protection of those agricultural lands through the use of conservation easements or other legal mechanisms.

- Incentives and cooperation between landowners and public agencies such as the use of the current use tax assessment provisions.
- Implementing land use policies that encourage farming on Rural lands of high agricultural productivity and potential.
- Discouraging conversion of designated agricultural lands to non-agricultural uses.
- Track acres lost due to conversion, development, or policy implementation such as critical areas ordinance, so mitigation strategies can be implemented to offset the acres lost.
- Education and marketing of programs that emphasize recognition of the local and regional significance of agricultural land as a natural resource and the economic, social and ecological benefits it provides.
- Working cooperatively with local farmers and coordinating with local and state agencies to address water quality impacts of agricultural activities on local streams and groundwater.
- Securing an adequate, sustainable, and legal supply of irrigation water sufficient to support the long-term viability of the local agricultural industry.
- Identify and evaluate any new or changed zoning or comprehensive plan agricultural lands of long term commercial significance designations as needed or warranted for the Rural Study Areas.
- Economic development assistance to agricultural-related enterprises.
- Recognize regulatory impacts and encourage farm friendly regulations.

Policy 8A-3:

The criteria for designating or de-designating lands under the Agriculture land use designation shall be considered on an areawide basis. When applying the following criteria, the process should result in designating an amount of agricultural resource lands sufficient to maintain and enhance the economic viability of the agricultural industry in the county over the long term, and to retain agricultural support businesses, such as processors, farm suppliers, and equipment maintenance and repair facilities. The criteria are as follows:

1. The land is not already characterized by urban growth. In determining this factor, the County should consider WAC 365-196-310 and RCW 36.70A.030(19).

2. The land is used or capable of being used for agricultural production. In making this determination, the County shall use the land-capability classification system of the U.S. Department of Agriculture Natural Resources Conservation Service. These eight classes are incorporated into map units and are based on the growing capacity, productivity, and soil composition of the land.
3. The land has long term commercial significance for agriculture. In determining this factor, consider the following nonexclusive criteria:
 - a. The majority of the area contains Prime Farmland Soils as determined by the Natural Resource Conservation Service (NRCS).
 - b. The area may contain 100-year floodplains as delineated by the Federal Emergency Management Agency (FEMA).
 - c. Land use settlement patterns, the intensity of nearby uses, and the history of approved land development permits are generally compatible with agricultural practices.
 - d. A majority of the area is composed of agricultural operations that were historically in agriculture prior to 1985.
 - e. The predominate parcel size in the area is large enough to adequately maintain agricultural operations.
 - f. The availability of public services.
 - g. The availability of public facilities such as roads used to transport agricultural products.
 - h. Special purpose districts that are oriented to enhancing agricultural operations such as drainage improvement, watershed improvement, and flood control exist.
 - i. The area has a pattern of landowner capital investment in agricultural operations improvements including irrigation, drainage, manure storage, the presence of barns and support buildings, enhanced livestock feeding techniques, agricultural worker housing, etc.
 - j. The area contains a predominance of parcels that have current use tax assessment derived from the Open Space Taxation Act.
 - k. The area's proximity to urban growth areas.
 - l. The area's proximity to agricultural markets.
 - m. Land value under alternative uses.

- Policy 8A-4: Support conservation of productive agricultural land by requiring the use of best management practices including soil and water conservation, livestock nutrient/manure management, etc.
- Policy 8A-5: Discourage conversion of productive agricultural land to incompatible non-agricultural uses.
- Policy 8A-6: Require all requests for re-designation from agriculture to demonstrate that changed site conditions or circumstances have occurred since the original designation to such an extent that the site no longer satisfies the designation criteria for agricultural lands.
- Policy 8A-7: Work cooperatively with farmers to prioritize agricultural activity in land use decisions when land is composed of prime and/or productive agricultural soils and agriculture is the highest value resource use.
- Policy 8A-8: Establish flexibility in land use plans and regulations to encourage maintenance of the productive agricultural land base, such as agricultural parcel reconfiguration.
- Policy 8A-9: Use an "Agriculture Protection Overlay" (APO) designation in certain Rural zoned areas as one way to increase agricultural production in areas outside of designated agricultural land of long-term commercial significance.
- Policy 8A-10: The Agricultural Advisory Committee shall advise the Whatcom County Executive and Council on agricultural issues and agricultural land use. Whatcom County shall support the Agricultural Advisory Committee with staff and other resources, and shall recognize the AAC’s input with regard to agricultural resource lands.

Agricultural Products Industry

Agriculture is an essential contributor to the local Whatcom County economy. Agriculture is most productive in large agricultural communities where neighbors support agriculture and where labor, farm supplies and market systems for farm products are available.

Agriculture is one of the most important resources in Whatcom County. Whatcom County works with farmers to ensure productive agricultural land and improved nutrient management practices help reduce impacts on aquatic lands. Whatcom County is also strongly supported by agriculture fiscally with sales and jobs.

Goal 8B: Maintain and enhance Whatcom County's agricultural products industry as a long-term and sustainable industry.

- Policy 8B-1: Promote the expansion and stability of local and regional agricultural economies.

- Policy 8B-2: Assist Whatcom County's agricultural industry in the pursuit of its long-term economic potential. This should include the development of strategies and policies necessary to reach this potential, in terms of both production and diversity.
- Policy 8B-3: Support agricultural product processing facilities through appropriate planning, zoning, and land use regulations.
- Policy 8B-4: Support methods and strategies to market Whatcom County agriculture in ways that ensure that agricultural activities (such as dairying) and entities (such as processors) will remain here in the long term.
- Policy 8B-5: Support improving the efficiency and flexibility of state and local environmental regulations affecting the agricultural products industry.
- Policy 8B-6: Utilize a range of result-oriented non-regulatory programs, options, and incentives, collaboratively developed and monitored by the County and landowners, that agricultural landowners can employ which meet or exceed county environmental regulations.

Agriculture Related Cultural Heritage

Agriculture is not just a business but a way of life, with many farmers farming the same land their parents and grandparents farmed. The sense of community that these people have built over the years is one of the most valuable assets of our county.

Nevertheless, the livelihood of these people appears to be threatened. Property has become a valuable commodity in Whatcom County and oftentimes young farmers cannot afford to buy productive farmland because the cost is so prohibitive.

Goal 8C: Preserve and enhance the cultural heritage that is related to agriculture.

- Policy 8C-1: Identify, preserve, and enhance community character, landscape, and buildings associated with agricultural activity.
- Policy 8C-2: Involve those who actually are engaged in agricultural activities, and give high regard to their opinions in the County's decision-making during the planning process. Use groups working effectively with the agricultural community to help preserve and/or create a sustainable economic agricultural base.
- Policy 8C-3: Support the continuation of owner occupied/family owned farms.
- Policy 8C-4: Encourage the use of programs that help beginning farmers buy productive farmland.
- Policy 8C-5: Develop and support more programs to promote ag-tourism and ag-education to increase public awareness of the nutritional and economic value of agriculture and quality food production.

Land Use Conflicts

The Right-To-Farm Ordinance was created because agriculture is the priority use. Usual and accustomed farm activities create odors, dust, sprays, noise from farm machinery, etc. and are prioritized with the Right-To-Farm Ordinance. Agriculture may conflict with other land uses. Improper nutrient/manure management practices on agricultural land may impact the commercial and recreational use of aquatic lands miles away. Residents of non-farm housing adjacent to farms, and owners and patrons of nearby commercial uses, have complained of nuisances such as odors, dust, chemical sprays, and noise from machinery. Farm equipment, crops, and livestock may suffer from increased vandalism. In addition, non-farm residential development, particularly residential subdivisions, can raise assessed valuation or lead to special assessments on adjacent farmlands, resulting in higher property taxes for farmers. The same is true of commercial uses. On the other hand, the open space value of farmland can be diminished or destroyed by the location of commercial uses such as junk yard, auto wrecking yards, etc.

Many agricultural drainage districts have been in existence since the early 1900s with little or no outside influence. Their sole function has been to keep the water table down low enough to allow crops to grow throughout the season. In the last few years, however, there has been growing concern about the impact this activity may have on fish habitat and fish populations. As a result, Hydraulic permits have been difficult to get from the Washington State Department of Fish & Wildlife and drainage activity has been slowed.

Mining activities, such as the extraction of sand and gravel, are often an alternative use of land zoned for agriculture. Such activities may limit options for later agricultural use, depending upon the intensity of the activity and the extent of soil rehabilitation efforts.

Many profitable agricultural operations are located on land outside of predominantly agricultural areas. Although these operations may not be entirely compatible with neighboring urban and suburban developments, they are important contributors to the agricultural base in Whatcom County.

Goal 8D: Reduce land use conflicts between Whatcom County's agriculture and non-agricultural landowners.

Policy 8D-1: Strive to reduce potential conflicts between incompatible agricultural activities by maintaining zoning regulations that protect productive agricultural lands of long-term commercial significance from conversion to non-compatible uses.

Policy 8D-2: Maintain the Right-To-Farm ordinance. Give priority to agricultural uses and owners of parcels zoned for agriculture priority in land use and nuisance conflicts with residents of adjacent properties and adjacent property owners.

Policy 8D-3: Support improved communication and understanding between agricultural landowners and the public through such mechanisms as community forums and educational programs.

- Policy 8D-4: Recognize the importance of surface mining as an agricultural practice when the activity contributes to enhancing subsequent agricultural uses on the property.
- Policy 8D-5: Accommodate the location of designated mineral resource lands in or near agriculture zones when determined by Whatcom County to be in the best interests of the community.
- Policy 8D-6: Support agricultural activity in mixed farm/rural residential areas, with the understanding that certain farm practices may conflict with other neighboring rural land uses.
- Policy 8D-7: Help resolve conflicts associated with maintaining and enhancing fish habitat and the necessary drainage work that is annually done by agricultural drainage districts, watershed improvement districts, and landowners.
- Policy 8D-8: Develop a continuum of efforts moving from education and outreach, development of voluntary best practices, technical assistance, and incentives, monitoring, and regulation, to minimize impacts when conflicts arise between agriculture and other land uses.
- Policy 8D-9: Encourage low intensity recreational activities that help sustain and are compatible with agricultural uses.
- Policy 8D-10: In the "Agricultural Protection Overlay" on parcels 20 acres and larger with Rural 5 acre and Rural 10 acre zoning, require non-agriculturally related development to be clustered on 20 or up to 30 percent of the available land with the remainder available for open space and agricultural uses. Development standards shall provide flexibility to achieve development potential in cases of natural limitations.

Fish and Wildlife

Use of agricultural lands can impact habitat, including riparian areas, stream flows, channel habitat structure, and water quality.

Goal 8E: Work with agricultural land users to find efficient and effective cooperative ways to protect and improve habitat of threatened and endangered species through education and incentive programs.

- Policy 8E-1: Ensure that adequate riparian buffers are maintained along rivers and streams.
- Policy 8E-2: Prevent livestock from degrading riparian and instream habitat by using best management practices for the fencing of livestock from streams and support the provision of alternative watering systems.
- Policy 8E-3: Encourage the use of integrated pest management practices, including herbicides and pesticides, that protect water quality.

- Policy 8E-4: Ensure proper storage and application of compounds that can pollute our waterways such as manure and other fertilizers, pesticides and herbicides.
- Policy 8E-5: Ensure properly functioning habitat conditions for those riparian areas and stream reaches that do not currently provide such habitat conditions through voluntary restoration, technical assistance incentives.
- Policy 8E-6: Encourage the maintenance and operation of drainage systems such that actual and potential habitat and water quality impacts from such systems are minimized and agricultural uses remain viable.
- Policy 8E-7: Work with the watershed improvement districts, drainage districts, and the Washington State Department of Fish and Wildlife to resolve tradeoffs associated with fish and wildlife habitat on agricultural lands.
- Policy 8E-8: Continue to work with farmers on improving water quality practices.
- Policy 8DE-9: Provide outreach and education to farmers on using Best Management Practices as defined by WCC 14.02.020 to protect water quality.
- Policy 8E-10: Develop and implement education and incentive programs that encourage agriculture land owners to take steps to improve habitat of threatened and endangered species.
- Policy 8E-11: Support State and Federal agencies in increasing funding and improving practices that avoid adverse impacts to the habitat of threatened and endangered fish and wildlife species and to marine waters that support shellfish resources.

Water for Agriculture

Agriculture uses a significant amount of water, most of which is pumped from wells or surface waters. Given the competition for scarce water supplies (addressed in Chapter 10, Environment, Water Resources), ways must be found to secure an adequate long-term water supply while encouraging water conservation and improving water quality prior to it entering the waterways.

Goal 8F: Strive to ensure adequate water supplies to support a thriving agricultural sector.

- Policy 8F-1: Actively participate in the WRIA 1 Watershed and Salmon Recovery Programs.
- Policy 8F-2: Conserve water resources from both a quantity and a quality perspective to ensure and possibly enhance continued agricultural viability.
- Policy 8F-3: Support the agricultural community’s access to sufficient legal water rights.

- Policy 8F-4: Balance the needs of agricultural water users with needs for instream uses through such process as the WRIA 1 Salmon Recovery Program.
- Policy 8F-5: Recognize while regulation of water quality is important, the water need for production of food, fiber, shelter and energy by agricultural resource lands is equally critical.

Forest Resource Lands

Introduction

Purpose

This section contains policies to guide Whatcom County in conservation of forest resources land of long-term commercial significance, and to implement the provisions of the Growth Management Act and the adopted Countywide Planning Policies.

GMA Requirements

Designation and conservation of forest resource lands of long-term commercial significance is required under the Growth Management Act (RCW 36.70A.060). The Growth Management Act [RCW 36.70A.030 (8)] defines forest lands as follows:

"Forest land" means land primarily devoted to growing trees for long-term commercial timber production on land that can be economically and practically managed for such production, including Christmas trees subject to the excise tax imposed under RCW 84.33.100 through 84.33.140, and that has long-term commercial significance. In determining whether forest land is primarily devoted to growing trees for long-term commercial timber production on land that can be economical and practically managed for such production, the following factors shall be considered: (a) the proximity of the land to urban, suburban, and rural settlements; (b) surrounding parcel size and the compatibility and intensity of adjacent and nearby land uses; (c) long-term local economic conditions that affect the ability to manage for timber production; and (d) the availability of public facilities and services conducive to conversion of forest land to other uses.

Long-term commercial significance is defined by RCW 36.70A.030 (10) as including:

The growing capacity, productivity, and soil composition of the land for long-term commercial production, in consideration with the land's proximity to population areas, and the possibility of more intense uses of the land.

Map 8-3 shows lands designated as forest resource lands of long-term commercial significance.

Process

Whatcom County has implemented zoning regulations for forest land since the 1970s. With the passage of the Growth Management Act, the county began to review the zoning classifications.

In 1991 a Forest Resource Lands Citizens' Advisory Committee composed of forest landowners, representatives of the Washington State Department of Natural Resources, forestry consultants, and private citizens was formed. The purpose of the committee was to provide review and recommendations on the draft designation of forest resource lands and the Rural Forestry and Commercial Forestry zones and land use code. The draft forest land designations were developed under the original GMA definition utilizing a set of locally derived criteria for more refined definition of forest lands. These criteria included average parcel size, parcel tax status, type of road access to each parcel, ownership status, presence of public services, and environmental constraints. In 1992, the committee's recommendations were forwarded to the Planning Commission and on to the County Council before adoption in 1993, with minor changes along the way. The draft forest resource land designations fulfilled the Growth Management Act's interim designation and conservation requirements for resource lands. These interim designations were eventually adopted as part of the Final 1997 Comprehensive Plan, in which over 35,000 acres were designated as Rural Forestry and over 186,000 acres were designated as Commercial Forestry.

In March 1994, the Forest Resource Lands Citizens' Advisory Committee was reconvened to develop and recommend goals and policies for the comprehensive land use plan. The goals and policies are a compilation of the previously existing county goals regarding forest lands, statements from the Visioning Committee's work, and statements generated by the committee. These goals and policies reflect a broad consensus of the community for the conservation and use of the forest resources of Whatcom County.

Background Summary

The forest resources of Whatcom County have historically been one of the most important natural resources in the region. Lands in the lower foothills that were initially harvested between 1900 and 1950 now support commercially mature stands of timber. In addition, a few areas of original forest still remain.

The majority of the county's non-federal forest resource lands (about 268,597 acres) are located in the foothills of western Whatcom County. Most of this land (223,613 acres) is zoned for forest production uses, and is owned and managed by a few large institutions, including natural resource based corporations, insurance companies, the State of Washington, and small private forest management companies. These landowners manage their lands primarily for the production of timber resources.

A smaller portion of the land zoned for forest production is owned and managed by individual woodlot owners and farm/foresters, some of whom reside on their properties.

Traditionally, forest land use has been seen as a lower economic value compared to agriculture, rural, suburban, urban, commercial, or industrial uses. As a result, some forest landowners have held forest land in reserve at low cost (current use tax status) while managing for forest products and waiting for the growth of more intense land uses in the vicinity of their property. Many landowners in Whatcom County have taken advantage of the current use taxation programs in order to make forest management on their land more economical. These programs greatly benefit community interests by helping forest landowners keep land in open space and forest use.

With a growing population, there is a genuine need to promote conservation of productive forest land and associated public resources through a balanced combination of regulatory protection as mandated by the Growth Management Act, and the provision of incentives for maintaining lands in long-term commercial timber production. It is state and county policy to provide forest landowners with long-term land use predictability, for both productive forest lands and adjacent non-forest use lands. Premature conversion of those productive forest lands to other land uses that are incompatible with the management of forest resources is recognized as a threat to the forest industry. Such conversions include changing the use of forest land from commercial timber production to incompatible residential, commercial, industrial, and agricultural land uses, or parks and preserves that exclude forest production management. Once forest land has been converted and roads, utilities and other infrastructure have been constructed, the land is not as useful for long-term commercial forest production. In addition, the encroachment of land uses such as non-forestry related residential into areas devoted to forest production can create conflicts between residents and forest landowners.

Issues, Goals, and Policies

The following goals and policies apply to both Rural and Commercial Forest lands and address the issues of conserving productive forest land and meeting the goals of the Growth Management Act.

Forest Land Base

The working forest land base in Washington State and in Whatcom County has been steadily decreasing over time. Most of the forest land base change has been attributed to conversion of forest land to parks, preserves, and set-asides, or environmental regulations. A minor amount of land has been converted to rights-of-way and urban and suburban uses. With the additional population growth forecast for Whatcom County, there will be continued pressure to convert all types of lands to residential uses. The greatest pressure to convert forest land will likely occur along the margins of traditional forest land where a spectrum of possible land uses may exist, in areas near infrastructure, and on forest sites with commanding views.

Complicating the issue of maintaining and protecting the forest land base from conversion is the existing diverse character of forest resource ownerships and forest management goals among Whatcom County's timber landowners. While the larger forest landowners manage their lands primarily for timber production, the smaller forest landowners tend to have diverse forest management goals. Zoning and land

use regulations to conserve forest land in Whatcom County need to recognize the range of diverse ownership goals and provide for a range of allowed land uses to ensure the viability of both large and small scale forest management goals while achieving the broader comprehensive goal of conserving the forest land base of the county.

Goal 8G: Support increasing Whatcom County's working forest land base and support policies that do not adversely impact the commercial forest land base.

Policy 8G-1: Recognize that rural woodlot owners, farm/foresters, small private timber companies as well as large natural resource corporations, the Federal Government, and the State of Washington constitute the ownership of the forest resource land base of Whatcom County.

Policy 8G-2: Provide appropriate land use regulation for the diverse forest resource lands within the county through the designation of Rural Forestry and Commercial Forestry zones.

Policy 8G-3: Apply the following general criteria for Rural and Commercial Forestry comprehensive plan designations and zones:

Rural Forestry: Lands mostly devoted to growing trees for commercial timber production, usually located within public service districts such as fire or water districts, accessed by private roads built to Whatcom County development standards or public roads, with low density residential development. Land parcels are generally 20 acres or greater in size.

Commercial Forestry: Lands primarily devoted to growing trees for long-term commercial timber production, located outside of public service districts such as fire and water districts, and accessed by private or state forest roads. Land parcels are generally 40 acres or greater in size.

Policy 8G-4: Support conservation of productive forest land by requiring the use of best management practices such as proper road construction and maintenance, prompt re-planting of harvested areas, and protection of forest soils.

Policy 8G-5: Support conservation of the working forest land base through cooperation between landowners, private organizations and public agencies, and through incentives such as the current use tax assessment provisions of RCW 84.33, and RCW 84.34.

Policy 8G-6: Encourage and support the use of the Small Forest Landowner Forestry Riparian Easement Program to help small landowner's economic viability and willingness to keep the land in forestry use (WAC 222-21-005).

Policy 8G-7: Establish flexibility in land use plans and regulations to encourage maintenance of the productive forest land base.

- Policy 8G-8: Review Title 20.42 (Rural Forestry) and 20.43 (Commercial Forestry) for opportunities to provide compatible non-forest uses that encourage forest landowners to keep their land in productive forest uses.
- Policy 8G-9: Discourage inappropriate conversion of designated forest land to incompatible non-forest uses. It is the intent of this policy not to allow conversion of GMA designated forest lands of long-term commercial significance outside the Lake Whatcom Watershed Overlay District if the proposed use is incompatible with the maintenance of long-term forest management. Incompatible uses include those that:
- create fire or safety hazards to adjacent forest land;
 - permanently alter or remove a significant portion of a parcel from production of forest products. A significant portion would be greater than 20% of the lot;
 - create significant financial hardships for adjacent forest landowners; or
 - can lead to land use conflicts with adjacent forest landowners.
- Policy 8G-10: Special districts should review their boundaries (e.g. fire districts, water districts) for conformance with forestry designations and consider making appropriate adjustments.
- Policy 8G-11: Recognize the difference between designated (mapped) forest lands and working forests. Designated forest lands may include public or private forest lands not actively managed for timber production, such as for parks, open space or habitat preservation purposes. Working forests are actively managed for timber production and to provide a balance of social, economic, and ecological benefits, products, and values.
- Policy 8G-12: Maintain a working forest land base by considering the impacts of working forests as part of the legislative decision making process. Measures that can be taken to support working forests may include:
- Land use policies that encourage active management plans on Rural Forest lands;
 - Track acres of forest lands lost from productivity due to conversion, development or policy implementation such as critical areas ordinance, and work with the forestry advisory committee to identify economically viable mitigation strategies that can be implemented to offset the acres lost;
 - Land use policies that recognize the multiple values of working forests and respect the rights and responsibilities of private and public forest landowners;

- Education programs that emphasize recognition that wood is a renewable natural resources;
- Public and institutional education programs that promote the benefits of working forests;
- Championing the implementation of the Northwest Forest Plan and completion of individual forest plans in order to re-balance the social, economic, and ecological benefits and products on a national forest specific basis;
- Ensuring that timber management plans submitted as part of the Designated Forest Land Current Use Tax program are implemented, or remove the property from the program; and
- Discouraging conversion of designated forest lands to non-forest uses.

Forest Products Industry

Investment in forest land is complicated by the long time it takes to realize any financial return from growing trees. Once a forest is harvested and a new forest plantation is established, it can take from 40 to 60 years at a minimum before another harvest can occur. Due to the fact that investments in forest land and timber growing are long term in nature, it is necessary to provide forest landowners with assurance that their investments will be realized.

Forest resource lands make an important contribution to the local economy in Whatcom County. Resource based employment continues to provide some of the better paying jobs in our local area. Several major employers operate primary and secondary forest product processing facilities. Furthermore, Whatcom County has a long history of involvement in the forest industry, with many families and communities involved in forest management.

Goal 8H: Support increasing the viability of Whatcom County's forest products industry.

Policy 8H-1: Support improving the efficiency and flexibility of state and local environmental regulations affecting the forest products industry, in order to assure environmental protection and improve predictability for the forest products industry while minimizing the regulatory costs to forest landowners.

Policy 8H-2: Develop a range of non-regulatory programs, options, and incentives that forest landowners can employ to meet or exceed county environmental goals.

Policy 8H-3: Support the efforts of the forest landowners and managers in Whatcom County to operate in a long-term, sustainable manner as part of a stable, broad based economy.

Policy 8H-4: Work cooperatively with the Washington State Department of Natural Resources to ensure the most productive and appropriate use of State Forest lands within Whatcom County.

- Policy 8H-5: Consider surface mining, along with rock crushing, washing, and sorting, when done as part of conducting forest practices within the forestry zones, as compatible uses.
- Policy 8H-6: Support forest product production facilities through appropriate planning, zoning, and land use regulations.
- Policy 8H-7: Encourage the United States Forest Service and the Department of Natural Resources to implement harvest practices that maximize the use of forest lands while allowing appropriate multiple uses.

Land Use Conflicts

One of the most significant impacts for timber landowners in Washington State is the growing number of conflicts between forest landowners and their neighbors. These conflicts are the result of expansion into the margins of commercial forest land base by people seeking residential land and recreational tracts, and who bring with them conflicting values concerning resource extraction, such as logging.

Goal 8H: Reduce land use conflicts between Whatcom County's forest and non-forest landowners.

- Policy 8I-1: Refine the Rural and Commercial Forestry zoning regulations to conserve productive forest lands of long-term commercial significance from conversion to non-compatible uses. This zoning recognizes the diversity of Forest Resource landowners and forestry land uses. This zoning should include provisions for compatible, non-forestry uses that encourage all forest landowners to maintain the productive forest land base while conserving them from conflicting uses.
- Policy 8I-2: Affirm Whatcom County Code Chapter 14.04, the Right-To-Practice-Forestry ordinance, which requires notification of property owners in the vicinity of forestry zones of the types of normal forest management operations likely to be conducted on forest land.
- Policy 8I-3: Prior to issuing a development permit or receiving approval for a rezone, every attempt should be made to annex all development into local fire district boundaries. Before a development permit or a rezone is approved, it should be demonstrated to the satisfaction of the County that adequate fire prevention measures will be in place for the resident and adjacent properties.
- Policy 8I-4: Support and encourage improved communication and understanding between forest landowners and the public through such mechanisms as voluntary forest management plans, community forest forums, and educational programs.
- Policy 8I-5: Work cooperatively with the Washington State Department of Natural Resources, forest landowners, and the general public to

address community concerns and land use conflicts that may arise as a result of forest practices.

Fish and Wildlife

Use of forestlands can impact habitat, including riparian areas, stream flows, channel habitat structure, and water quality.

Goal 8J: Support the Department of Natural Resources to ensure forest practices avoid adverse impacts to the habitat of threatened and endangered fish and wildlife species and to marine waters that support shellfish resources.

Policy 8J-1: Ensure that adequate riparian buffers, based on best available science, are maintained along rivers and streams.

Policy 8J-2: Minimize sedimentation to rivers and streams, to the greatest extent possible, using BMPs.

Policy 8J-3: Ensure that riparian and stream functions are protected when forestlands are converted to non-forestry uses.

Mineral Resources

Introduction

Purpose

The purpose of this section is to guide Whatcom County in conservation of mineral resource lands of long-term commercial significance and in land use decisions involving lands where mineral resources are present, and to implement the provisions of the Growth Management Act and the adopted Countywide Planning Policies.

Process

In 1990, the Washington State Legislature passed the Growth Management Act. One of the goals of the act is to maintain and enhance resource-based industries.

The Act mandates that each county planning under the Act classify and designate mineral resource lands of long term commercial significance.

To address the mandates of the Growth Management Act, Whatcom County formed a Surface Mining Citizens' Advisory Committee in the 1990s to produce, through a consensus process, the issues, goals, and policies found in this chapter. Planning staff drafted the sub-section on mineral designations following review and comments from the committee.

In 1992, Whatcom County adopted an Interim Classification of Mineral Resources provided by the Washington State Department of Natural Resources. This classification system, as well as existing resource information, was used for the interim designation of mineral resource lands of long-term commercial significance. Through their involvement, the Surface Mining Advisory Committee recommended a longer planning horizon, which would require additional mineral resource areas.

Additional MRLs were, in fact, designated when the Comprehensive Plan was adopted in 1997.

Since 1997, amendments for MRL designation have been landowner initiated.

GMA Requirements

One of the goals of the Growth Management Act is to maintain and enhance resource based industries, including the aggregate and mineral resource industries, with the purpose of assuring the long-term conservation of resource lands for future use. The goals and policies in this section support that goal. In addition, the GMA mandates that each county shall classify mineral resource lands and then designate and conserve appropriate areas that are not already characterized by urban growth or have other GMA values that may preclude designation and that have long-term commercial significance.

The Growth Management Act requires that each county planning under the act shall designate mineral resource lands. Mineral resource lands are lands primarily devoted to the extraction of minerals or that have known or potential long-term commercial significance for the extraction of minerals.

Classification is first step in implementing natural resource lands designations, as required in RCW 36.70A.170, and requires defining categories to which natural resource lands and critical areas will be assigned. Designation is the second step in implementation, in which natural resource lands must be designated based on their defined classifications. Designated Mineral Resource Lands of Long Term Commercial Significance are displayed on **Map 8-4**.

As part of the required periodic review, Whatcom County must consider new information in determining if amendments are necessary to the mapped designated mineral resources.

Background Summary

Mining activities in Whatcom County have taken place since the 1850s, though the nature, scope and extent of such activities has changed considerably through time. These changes have reflected the economics involved at each point in time at least as much as they reflect the geologic character of Whatcom County. Historically, the more important mineral commodities of Whatcom County have been coal, gold (placer and lode), sandstone, clay, peat, limestone, olivine, and sand and gravel aggregate, with the latter three being especially important at present.

In Whatcom County, sand and gravel mining has been historically concentrated mainly to the east of Interstate-5 and north of Bellingham, with some exceptions. The more important historic aggregate mining areas from east to west include: (1) the Siper and Hopewell Road area two miles north of Nugent's Corner; (2) the Breckenridge Road area just east of Nooksack; (3) the Pangborn and Van Buren Road area two and one half miles southwest of Sumas; (4) the Pole and Everson-Goshen Road area to the southwest of Everson; (5) the Axton Road area one mile east of Laurel; and (6) the Valley View Road area three miles to the east of Blaine.

Limestone has been mined since the early 1900s in Whatcom County. Historically, the main use for limestone was for Portland cement manufacturers and pulp and

paper industries. Today, limestone is mined in the Red Mountain area north and east of Kendall and is primarily used for rip-rap to mitigate effects of flooding, and for crushed rock. In 1966, about 500,000 tons of limestone were produced annually from deposits on Red Mountain and deposits north of Maple Falls. Since then, limestone mining has decreased significantly.

Whatcom County is home to one of the largest known deposits of olivine in the United States, located in the Twin Sisters Mountain. The extraction of high quality Twin Sisters dunite (olivine) by the Olivine Corporation, largely from the Swen Larsen Quarry, has ranged from 400 tons in the early years of operation to a more recent annual average of approximately 70,000 to 80,000 tons.

In the past extraction of river gravel occurred primarily within the banks of the Nooksack River between Deming and Lynden. As of March, 1993, 34 gravel bars had approved status for extraction. However, because of federal regulations and decreasing seasonal windows in which gravel could be removed from the river due to impacts to riparian habitat and endangered salmon spawning and habitat, there has not been any river bar scalping on the Nooksack River since 1995.

Issues, Goals and Policies

General Issues

While development creates demand for sand and gravel resources, it may also encroach upon or build over those same resources, rendering them inaccessible. Strong community opposition to mining near residential, agricultural, or sensitive environmental areas may also limit extractive opportunities. Adequate resource protection could help to ensure a competitive market and to guard against inflated land prices by allowing the supply of minerals to respond to the demand of a free market. Helping the aggregate industry and the associated businesses, trades, and export markets also creates jobs and stimulates the economy, to the benefit of the county.

Surface mining can create conflicts with other land uses. Those impacts may include increased noise, dust, scenic impacts, traffic, road wear, and neighboring property devaluation. Mines can affect property values while at the same time nearby residents may use the area for shooting, dirt bike riding, and other activities. Controlling trespassing to surface mining can be a significant safety issue for mine operators. Adjacent land use issues range from the right to mine and use the value of mineral resource land to the right to live in an area with a high quality of life and retain home values. Citizens may be generally unaware of the county zoning of surrounding property and the mining uses that are allowed. Trespassing and various other activities that may conflict with other land uses are generally illegal and can cause liability for mine owners/operators. Numerous federal, state, and local regulations also mitigate impacts of noise, dust, traffic, and environmental issues. These and other factors may contribute to a climate of distrust and hostility between the aggregate industry and property owners in the vicinity.

Surface mines, when reclaimed properly, can enhance wetlands, fish, and wildlife habitat, possible productive agricultural land, or provide land for parks, housing, industrial, or other uses. When not reclaimed properly, mines may create

environmental issues, such as groundwater or aquifer impacts, and contamination or disruption of fish and wildlife habitat.

As a natural result of geologic forces, it is not uncommon in Whatcom County to have excellent mineral deposits located under prime farmland soil and above an aquifer recharge area. Mining in these areas can substantially reduce the productive capacity of the soil and make the underlying aquifer more susceptible to contamination. Removing the soil overburden eliminates the natural filtration system, exposing the aquifer to direct contamination from turbidity, industrial spills, illegal dumping and agriculture products. Removing, stockpiling and spreading soil may create a risk of compromising the productive capacity of the most productive and versatile farmland in the county. Another potential problem is that digging out a side hill and/or through a clay barrier could tap the groundwater and suddenly drain an aquifer. This creates a conflict between competing natural resource industries; agriculture and mining. While agriculture is a sustainable industry, mining is an industry that relies on a fixed, nonrenewable resource.

Goal 8K: Sustain and enhance, when and where appropriate, Whatcom County's mineral resource industries, support the conservation of productive mineral lands, and discourage incompatible uses upon or adjacent to these lands.

Policy 8K-1: Conserve for mineral extraction designated mineral resource lands of long-term commercial significance. The use of adjacent lands should not interfere with the continued use of designated mining sites that are being operated in accordance with applicable best management practices and other laws and regulations.

Policy 8K-2: Support the use of new technology and innovative techniques for extraction, processing, recycling and reclamation. Support recycling of concrete and other aggregate materials. Support the efficient use of existing materials and explore the use of other materials that are acceptable substitutes for mineral resources.

Policy 8K-3: Minimize the duplication of authority in the regulation of surface mining.

Goal 8L: Ensure mineral extraction industries do not adversely affect the people and other properties in the vicinity, by establishing appropriate and beneficial designation and resource conservation policies, while recognizing the rights of all property owners.

Policy 8L-1: Avoid significant impacts on adjacent or nearby land uses, public health and safety, or natural resources from mineral extraction.

Policy 8L-2: Consider the maintenance and upgrade of public roads before approving mineral extraction. Address all traffic on county roads in a fair and equitable fashion.

- Policy 8L-3: Avoid adversely impacting ground and surface water quality. The protection of aquifers and recharge zones should have precedence over surface mining in the event it is determined by the county that adverse impacts cannot be avoided through the standard use of best management practices. Avoid contamination of aquifers by using best management practices for reclamation or on-site storage.
- Policy 8L-4: Where the county has jurisdiction, require reclamation of mineral resource lands to other compatible uses on an ongoing basis as mineral deposits are depleted. Best Management Practices should be used to achieve this.
- Policy 8L-5: As part of the mining permit process, plan for an ultimate end use for land used for mineral extraction that will complement and preserve the value of adjoining land.
- Policy 8L-6: Where not subject to the Surface Mining Act, require security to cover the costs of reclamation prior to extraction activity, and insurance policies or a similar type of protection as appropriate to cover other potential liabilities associated with the proposed activity.
- Policy 8L-7: Designate site-specific mineral resource lands only after mineral extraction impacts have been anticipated and evaluated, and potential adverse environmental impacts have been addressed through appropriate mitigation and/or reasonable alternatives.
- Policy 8L-8: Expansion of MRL designations to parcels contiguous to, and held by more than 1% common beneficial ownership or beneficial interest with an existing mine is allowed, but before extraction of the additional area may commence the existing mine must be in complete compliance with all operating permits and regulations.
- Policy 8L-9: Through a site specific geotechnical analysis of potential impacts, ensure mineral extraction within 500 feet of gas or petroleum transmission pipelines will not result in an increased likelihood of the pipeline becoming exposed or rupturing during an earthquake.

Rural and Urban Areas

Many of the rural areas in Whatcom County have been and are being used for mineral extraction. Low density rural areas with potential natural resources such as sand and gravel may be able to accommodate a variety of uses, and surface mining has been a traditional use. Significant mineral deposits occur in certain parts of the rural areas. Some of these areas have higher surrounding residential densities than others, and many rural residents expect less intrusive forms of land uses. Determining which areas are the most appropriate for mineral extraction is a difficult and challenging task.

Goal 8M: Achieve a balance between the conservation of productive mineral lands and the quality of life expected by residents within and near the rural and urban zones of Whatcom County.

- Policy 8M-1: Discourage new residential uses from locating near designated mineral deposit sites until mineral extraction is completed unless adequate buffering is provided by the residential developer.
- Policy 8M-2: Protect areas where existing residential uses predominate against intrusion by mineral extraction and processing operations.
- Policy 8M-3: Allow accessory uses to locate near or on the site of the mineral extraction source when appropriate. Authorize crushing equipment to locate near the mineral extraction source as a conditional use provided that all pertinent regulatory standards are maintained. Site asphalt and concrete batch plants as a conditional use, addressing potential impacts for the site.
- Policy 8M-4: Buffer mineral resource areas adjacent to existing residential areas. Buffers could consist of berms and vegetation to minimize impacts to adjacent property owners. Buffers should be reduced for a limited period of time during reclamation if quality minerals are contained therein.
- Policy 8M-5: Encourage mineral extraction operators in the county to voluntarily provide resource use information to nearby landowners, and to develop a good neighbor policy, such as voluntary mine management plans and community and educational forums.

Agricultural Areas

There is considerable overlap between high quality aggregate lands and high quality agriculture lands. Several deposits represent a primary source for sand and gravel and, as well, form the parent material for prime agricultural soils. Both large, deep, open pit mines and smaller projects removing ridges and high ground have been operating in these overlap areas in the agricultural district. The smaller projects usually occur on dairy farms where corn or grass is cultivated. Potential drawbacks from commercial mining in agricultural areas may include reclamation problems, the loss of scenic terrain, an increased risk of groundwater contamination from future agricultural practices, soil rehabilitation difficulties, negative cost-benefit balance, and drainage may also be adversely affected.

Some farmers want the freedom of choice to use their land for farming or surface mining, especially in cases where mining income could "save the farm." Others want to preserve farmland. Some questions to consider are the extent to which surface mining should occur on farmland and the extent to which it should be reclaimed back to farmland if it does occur.

The agriculture zone is sparsely populated and there are fewer conflicts between homeowners and mining industries than in urban or rural zones. Nevertheless, mining activities can significantly impact nearby landowners.

Goal 8N: Recognize the importance of conserving productive mineral lands and conserving productive agricultural lands within or near the agricultural zones of Whatcom County without jeopardizing the critical land base that is necessary for a viable agricultural industry.

Policy 8N-1: Allow mining in the agriculture zone that would enhance farming by leveling knolls and ridges when appropriate. In these areas, reclamation of mineral extraction sites shall occur in a timely fashion. The site should also be restored for uses allowed in an agricultural zone and blend with the adjacent landscape and contours.

Policy 8N-2: Avoid the use of designated agricultural land for mineral or soil mining purposes unless the soils can be restored to their original productive capabilities as soon as possible after mining occurs.

Policy 8N-3: Allow accessory uses such as washing and/or screening of material to locate near or on the site of the mineral extraction source when appropriate. Within MRL designations, authorize application for mineral processing facilities such as rock crushers and concrete plants through the conditional use process.

Forestry Areas

Surface mining of gravel and rock resources is an integral part of a forest landowner's forest management. Adequate supplies of gravel and rock not only add to the economics of forest management, but also reduce environmental impacts of forest roads. Rock crushing helps conserve a valuable commodity by reducing the amount of material necessary for road construction. The use of crushed rock on roads reduces the amount of sediment developed and better protects water quality.

Zoning densities in the Forestry Districts protect the access to mineral resources in the future. These regions contain most of the county's hard rock reserves, such as olivine and limestone. In some areas, the soils overlaying mineral deposits may have a lower productivity for growing timber compared to the high mineral resource value.

As lowland sand and gravel resources become exhausted or unavailable, the commercial potential of mining in forest zones increases enough to warrant the expense of hauling. While this would increase the potential for impacts, such as heavier truck traffic, land use conflicts may be minimal based on the lack of or low residential densities in these zones.

Goal 8P: Maintain the conservation of productive mineral lands and of productive forestry lands within or near the forestry zones of Whatcom County.

- Policy 8P-1: Recognize the importance of forest lands in the county and the importance and appropriateness of surface mining as part of conducting forest practices within the forest zones.
- Policy 8P-2: Allow rock crushing, washing and sorting in the forest zones when appropriate as long as conflicts with other land uses can be mitigated.
- Policy 8P-3: Allow commercial surface mining operations in the forest zones when appropriate as long as conflicts with other land use zones can be mitigated.
- Policy 8P-4: Carefully consider the siting of asphalt and concrete batch plants due to possible adverse impacts.

Riverine Areas

The benefits of river bar scalping are local and it may have negative effects in areas surrounding the mining site. For example, if done improperly gravel removal can de-stabilize the river channel locally and increase, rather than decrease, flood damage downstream. After intensive bar scalping, floodwater that is normally stored on the floodplain of the mined reach can be concentrated and dumped on the reach immediately downstream.

If gravel mining exceeds the rate of replenishment from upstream, the river bed may lower both upstream and downstream; this bed degradation can undermine bridge supports and other structures, cause adjacent banks to erode (or stabilize, depending on how much and where gravel is removed), lower groundwater tables adjacent to the river, and damage riparian vegetation.

Improper mining methods in fish spawning reaches can de-stabilize spawning gravel or clog it with silt, remove cover vegetation or trap smolts during out-migration. Over harvesting of gravel can erode the river bed and expose the underlying substrate, reducing or eliminating pool and riffle habitat for fish and other aquatic animals. Finally, petroleum spills from mining equipment can degrade local surface water quality if not responded to properly.

While river gravel is a resource that could extend the life of other Whatcom County gravel resources, river bars are not a reliable source from year to year. The amount of gravel that can be mined varies with seasonal and yearly rates of gravel deposition; high and low water levels and timing; and fish migration, spawning and out-migration timing.

Various costs raise the price of river bar gravel. For example, there are several streams (e.g. Boulder Creek, Porter Creek, Glacier Creek, etc.) which may offer significant quantities of sand and gravel, but which are not currently being mined due to prohibitive transportation costs. Other factors include the cost and limited availability of access easements to the river, the repeated handling that is necessary for extraction and processing of the material, and the cost of complying with regulations.

Finally, many state and federal regulations restrict scalping locations and practices. The cost and time delay of duplicate regulation, environmental restrictions, royalty charges and the regulatory process are deterrents to river bar mining.

Goal 8Q: Subject to Federal and State regulations, support the extraction of gravel from river bars and stream channels in Whatcom County for flood control purposes and market demands where adverse hydrologic and other environmental effects are avoided or minimized.

Policy 8Q-1: Designate river gravel as a supplemental source to upland reserves.

Policy 8Q-2: Allow, when appropriate, the stockpiling, screening, and washing of river gravel in all zone districts when associated with river gravel extraction as close to the extraction site as possible to keep handling and transportation costs to a minimum.

Policy 8Q-3: Design river gravel extraction to work with natural river processes so that no adverse flood, erosion, or degradation impacts occur either upstream or downstream of extraction sites. Base mining extraction amounts, rates, timing, and locations on a scientifically determined sediment budget adjusted periodically according to data provided by a regular monitoring plan.

Policy 8Q-4: Locate and operate river gravel extraction to provide long-term protection of water quality and quantity, fish and wildlife populations and habitat, and riparian vegetation.

Policy 8Q-5: Plan and conduct operations on rivers and streams so that short- and long-term impacts and hazardous conditions are either prevented or held to minimum levels that are not harmful to the general public. Create as little adverse impact on the environment and surrounding uses as possible.

Policy 8Q-6: Fully consider the recommendations of the Flood Hazard Management Committee to encourage gravel bar scalping that decreases the likelihood of flooding and lowers the costs of flood damage and repair, flood management, and emergency services.

Policy 8Q-7: Support the use of gravel from tributary streams for flood hazard control, provided environmental impacts are fully addressed.

Policy 8Q-8: Support the use of existing public access easements to allow gravel removal.

Policy 8Q-9: Work with other jurisdictions and related agencies to reduce or eliminate redundant regulations, streamline the permitting process, and provide greater opportunities for appropriate river

gravel extraction to enhance other important resources, specifically agricultural.

Mineral Designations

The interim designations, adopted as part of the 1993 Comprehensive Plan, were based upon minimal criteria. A more complete set of designation criteria is necessary in order to better define which areas in the county are appropriate for mineral designations. These designations should also include quarry rock and valuable metallic mineral sites because interim designations did not include these resources.

The interim designations were also based more upon a twenty year planning horizon than a fifty year planning horizon. In the past, the Surface Mining Advisory Committee has recommended planning for a fifty year supply. While achieving a 50-year local supply may not be practical due to limitations of mineral resources, protecting identified mineral resource areas that are not currently in conflict with other important goals of the GMA is an important long-term goal. However, it should be recognized that due to geologic constraints particular to Whatcom County long-term aggregate supply may not be entirely met by local supplies and some areas of Whatcom County may be better served by import of aggregate materials from sources outside of Whatcom County. Implementing the protection of mineral resources of long-term economic significance will require the adoption of criteria allowing for additional mineral resource areas.

Additional MRLs were, in fact, designated when the Comprehensive Plan was adopted in 1997 in an attempt to plan for a fifty-year supply of mineral resources. The fifty year demand for minerals in Whatcom County is difficult to project and requires many assumptions. In 2004, after review of multiple studies, the Surface Mining Advisory Committee concluded that the existing MRLs do not contain a fifty-year supply of mineral resources , and that meeting the demand for construction aggregate in Whatcom County will require expansion of the mineral resource land designations and the consideration of importing aggregate. The policies and criteria below are meant to guide meeting the demand for construction aggregate.

Goal 8R: Designate Mineral Resource Lands (MRLs) containing commercially significant deposits throughout the county in proximity to markets in order to minimize construction aggregate shortages, higher transport costs, future land use conflicts and environmental degradation. Balance MRL designations with other competing land uses and resources.

Policy 8R-1: Through a county-led countywide assessment, seek to identify and designate potential commercially significant mineral resource lands, to meet future demand, compatible with water resources, agricultural lands, forest lands and other GMA goals.

Policy 8R-2: Ensure that designations of urban growth boundaries are consistent with mineral designations by considering existing and planned uses for the designated areas and adjacent properties.

Intergovernmental agreements should demonstrate how future land uses of mined areas will protect underlying aquifers, given the increased groundwater vulnerability to contamination.

- Policy 8R-3: Allow mining within designated MRLs through a conditional use permit process requiring:
- on-site environmental review, with county as lead agency, and
 - application of appropriate site specific conditions, and
 - notification to neighboring property owners within 2,000 feet to insure opportunity for written and oral input.
- Policy 8R-4: Consider potential resource areas (PRA) identified in the Report Engineering Geology Evaluation Aggregate Resource Inventory Study Whatcom County, Washington (GeoEngineers, Inc., Sept. 30, 2003) and updated in the Aggregate Resource Inventory 2014 Study Update Whatcom County, Washington (Element Solutions, December 22, 2014) for MRL designation and during county review of land development projects in order to avoid development incompatible with mineral resource extraction.
- Policy 8R-5: Work with the Port of Bellingham, the City of Bellingham, or waterfront property owners to facilitate the importation of mineral resources necessary to provide county citizens with adequate mineral resources at reasonable prices.
- Policy 8R-6: Consider removal of land from Mineral Resource Designation after mining and subsequent reclamation is completed.

Fish and Wildlife

Use of mineral resource lands can impact habitat, including riparian areas, stream flows, channel habitat structure, and water quality.

Goal 8S: Ensure that mining avoids adverse impacts to the habitat of threatened and endangered fish and wildlife species.

- Policy 8S-1: Ensure that adequate riparian buffers are maintained along rivers and streams.
- Policy 8S-2: Ensure proper treatment of wastewater prior to discharge.
- Policy 8S-3: Provide and maintain best management practices for erosion control to prevent sedimentation.
- Policy 8S-4: Provide proper storage of hazardous materials.
- Policy 8S-5: Provide for appropriate on-site spill response, containment and clean-up materials and personnel.
- Policy 8S-6: Work with state and federal agencies to develop policies and regulations regarding in-stream gravel extraction to ensure that protected species, essential fish habitat, or other critical areas

are not adversely impacted and that flooding or erosion in surrounding areas is not increased.

Policy 8S-7: Avoid river bar scalping where it would adversely affect spawning salmon or critical habitat areas.

Mineral Resource Lands (MRL) – Designation Criteria

Non-Metallic Mineral Deposits

General Criteria

1. Non-metallic deposits must contain at least 1,000,000 cubic yards of proven and extractable sand, gravel, or rock material per new MRL Designation.
2. Minimum MRL Designation size is twenty acres.
3. Expansion of an existing MRL does not need to meet criteria 1 or 2.
4. MRL Designation status does not apply to surface mines permitted as an accessory or conditional use for the purpose of enhancing agriculture or facilitating forestry resource operations.
5. All pre-existing legal permitted sites meeting the above criteria will be designated.
6. The site shall have a proven resource that meets the following criteria:
 - Construction material must meet current WSDOT Standard Specifications for common borrow criteria for road, bridge and municipal construction, or Whatcom County standards for other uses.
 - Sand and gravel deposits must have a net to gross ratio greater than 80% (1290 cy/acre/foot).
7. MRL Designations must not be within nor abut developed residential zones or subdivisions platted at urban densities.
8. MRL Designations must not occur within the 10 year zone of contribution for designated wellhead protection areas, as approved by the State Department of Health for Group A systems, and by the Whatcom County Health Department for Group B systems, in accordance with source control provisions of the regulations on water system comprehensive planning. MRL designations may be modified if a wellhead protection area delineated subsequent to MRL designation encompasses areas within a designated MRL. If a fixed radii method is used to delineate a wellhead protection area, the applicant may elect to more precisely delineate the wellhead protection boundary using an analytical model; provided, that the delineated boundary proposed by the applicant is prepared by a professional hydrogeologist; and further provided, that the delineated boundary has been reviewed and approved by the Washington State Department of Health for Group A systems, and by the Whatcom County Health Department for Group B systems. The hydrogeologist shall be selected by mutual agreement of the county, water purveyor, and applicant; provided, if agreement cannot be reached the applicant shall select a consultant from a list of no less than three qualified consultants supplied by the county and water purveyor.

9. MRL Designation should not enclose by more than 50% non-designated parcels.
10. Site-specific MRL designations shall only be approved after mineral extraction impacts have been anticipated and evaluated, and potential adverse environmental impacts have been addressed through appropriate mitigation and/or reasonable alternatives.
11. MRL Designations must be reviewed for internal consistency with other parts of the comprehensive plan so that the MRL designation does not preclude achievement of other parts of the comprehensive plan.
12. Expansion of MRL Designations to parcels contiguous to, and held by more than 1% common beneficial ownership or beneficial interest with an existing mine is allowed, but before extraction of the additional area may commence the existing mine must be in complete compliance with all operating permits and regulations.

Additional Criteria for Designated Urban and Rural Areas

13. Abutting parcel size density must not exceed one unit per nominal five acres for more than 25% of the perimeter of the site unless project specific mitigation is created.

Additional Criteria for Designated Forestry Areas

14. Must demonstrate higher value as mineral resource than forestry resource based upon:
 - soil conditions.
 - quality of mineral resource.
 - sustainable productivity of forest resource.

Additional Criteria for Designated Agricultural Areas

15. Prohibit MRL designations in areas designated Agriculture by the Whatcom County Comprehensive Plan that contain "Prime Farmland Soils" determined by the Natural Resource Conservation Service.

River and Stream Gravel

16. MRL Designation status applies to river gravel bars possessing necessary permits and containing significant quality reserves.
17. MRL Designation status may apply to those upland sites located in proximity to river gravel sources and used primarily for handling and processing significant amounts of river gravel.

Metallic and Industrial Mineral Deposits

18. For metallic and rare minerals, mineral designation status extends to all patented mining claims.
19. Mineral Resource Designation status extends to all currently permitted industrial mineral deposits of long-term commercial significance.
20. All other non-patented mineral deposits must meet the non-metallic MRL Designation criteria, numbers 6 through 15, as applicable.

Mineral Resources – Site Selection Method

1. Sites meeting Mineral Resources Designation Criteria 1-5 (and areas enclosed by these sites greater than 50%).
2. Sites requested by owner or operator meeting designation criteria.
3. Sites that are regionally significant meeting designation criteria.
4. Sites adjacent to both roads and other proposed MRL sites meeting designation criteria.

Marine Resource Lands

Introduction

Purpose

This section contains policies to guide Whatcom County in the creation of a new section for this chapter to ensure the conservation of functioning marine resource lands of long-term commercial and recreational significance, and to ensure that both industries requiring functioning marine lands, and the cultural heritage that use of our marine lands represent, thrive in the years to come.

GMA Requirements

Goal 8 of the GMA (RCW 36.70A.020) guides the county to "*Maintain and enhance natural resource based industries, including productive timber, agricultural, and fisheries industries.*" Marine lands have a clear nexus regarding maintenance of fisheries industries, including commercial and recreational shellfish harvest. While the GMA does not require specific designation of marine resource lands that support aquatic based industries, functioning marine lands are so intrinsically necessary for production of historical fish and shellfish production that these lands are identified on our GMA required critical areas maps, shoreline inventory and analysis, and integral in the state/county approved 2008 Shoreline Restoration Plan.

Issues, Goals, and Policies

The following goals and policies apply to both designated and undesignated marine lands and are meant to help in the creation of this section to address the issues of conserving productive marine land and meeting the goals of the Growth Management Act.

Goal 8T: Conserve and enhance Whatcom County’s marine land base for the long-term and sustainable production of commercial and recreational economic activities.

Policy 8T-1: Whatcom County will work with committees including but not limited to the Marine Resource Committee, the Shellfish Protection Advisory Committee, and other local marine land experts to create a new section of this chapter to support Goal 8S to be docketed and processed for consideration no later than 2017.