LAND USE ELEMENT [Not updated in 2000]

I. INTRODUCTION

1. Growth Management Act Requirements

The Growth Management Act requires cities to prepare a land use element that designates the proposed general distribution and general location and extent of the uses of land that includes population densities, building intensities, and estimates of future population growth. The element must provide for protection of the quality and quantity of ground water used for public water supplies. Where applicable, the land use element must review drainage, flooding, and storm water run-off in the area and provide guidance for preventing degradation of waters of the state.

2. Purpose of the Land Use Element

The Land Use Element addresses existing and future land uses in the City of Brier and the adjacent City Planning or Sphere of Interest Area, and presents the community's policy plan for growth over the next 20 years.

The Land Use Element is the heart of the comprehensive plan. It is the focal point for analyzing and weighing the interrelationships between various plan elements and for achieving consistency between elements. The Land Use Element describes how the goals in the other plan elements will be implemented through land use policies and regulations, and thus, it is a key element in implementing the comprehensive plan.

A community's Land Use Element establishes the desirable character, quality, and pattern of the physical environment, which is the stage on which a community's day-to-day activities are played out. It specifies the appropriate amount and location and for various land uses, and establishes the appropriate densities or intensities of permitted land uses in the City. The Land Use Element will guide public and private decisions about when, where and how future development takes place and where public facilities are located. It will govern the development of land use regulations and other programs which will implement land use policy direction.

3.Urban Growth Area (UGA)

The Growth Management Act (GMA) calls for urban growth boundaries to be established that contain areas characterized by urban growth or where growth will be encouraged and can be supported with adequate facilities. The Countywide Planning Policies for Snohomish County specifies policy considerations for implementing urban growth areas. The City of Brier has designated a City Planning or Sphere of Interest Area to the north and east of the present City limits, as depicted in figure 2, Vicinity Map of the Executive Summary section. To the east, the Brier urban growth boundary abuts the city limits of Bothell. The Brier City Planning or Sphere of Interest Area includes approximately 1,800 acres.

The delineation of the City Planning or Sphere of Interest Area does not mean that the unincorporated subarea lands will be annexed to the City. Annexation is a matter that

will be determined by City officials and all residents affected, based on the interest of both City residents and those who seek annexation. When annexation of areas is being considered, it is the goal of the City to retain the large lot, single family residential character so as to be compatible with the existing Brier community.

It is to be recognized that decisions made by other jurisdictions and agencies affecting the City Planning or Sphere of Interest Area and other surrounding areas will have a certain relationship and impact upon the City of Brier. Brier is keenly interested in future developments in these areas because of the potential demands upon services provided within Brier- its streets, schools, parks, police protection, sanitation, watershed, and ecology. It is a goal of the City to encourage land use, traffic, community facility and service decisions within the urban growth area and a larger sphere of interest area, that would be compatible with Brier and would not adversely impact existing land uses nor put an undue burden on the City's roads, parks or other public facilities.

II. EXISTING CONDITIONS

1. Natural Environment

Conditions of the natural environment in the City of Brier were thoroughly analyzed and discussed in the 1989 Comprehensive Plan. Descriptive information and maps on geology, topography, soils, surface water, ground water, vegetation, and fish are included in Appendix A of the Comprehensive Plan. Below, is provided a summary of how the features of the natural environment may effect development conditions in the City of Brier.

a. Natural Environment Development Constraints

The existing conditions of the biological and physical elements of the environment described in Appendix A interrelate in the landscape posing development constraints of varying degree. The limitations posed by surficial geology, slope, soils, hydrology, and vegetation are additive, resulting in significant, moderate, or minor constraints within the Brier study/interest area. Figure 1, Development Constraints, depicts environmental limitations on development.

The development constraints work was completed for the 1989 Comprehensive Plan and the conclusions are very general in scope. Many of the constraints would not deter development in areas served with sewer systems or with careful site planning. It is provided in the Plan for general planning reference only, and there are no regulations specifically associated with the mapping. Development limitations associated with environmentally sensitive areas are discussed further in a section below.

The biological and physical elements interrelate to generally favor development in the areas of minor constraints. These areas are typically flat to gently sloping, located where surficial geology and soils favor building construction, and where groundwater recharge is not significant. Much of these areas are already developed and forests have been cleared for further development. However, important stands of forests do exist within the minor constraint areas.

The moderate development constraint areas are generally not favorable for building construction due to surficial geology, soils and slope. Special planning, design, or maintenance is needed to overcome or minimize the limitations. Groundwater recharge does not occur in these areas in significant quantities. Like the areas of minor constraints, stands of forests also occur in these areas, but to a greater degree.

The remaining landscape occurs where the biological and physical elements interrelate to pose development constraints of significant magnitude. Indeed, certain areas are so sensitive that no development should take place. In others, the elements are so unfavorable for building construction or so difficult to overcome that special design, significant increases in construction costs, and possibly increased maintenance are required. In addition, special feasibility and/or environmental studies may be required. Generally, the areas of significant constraints are steeply sloping, have soils with severe limitations for building upon, are areas of groundwater recharge, and in many instances undeveloped, with a nearly continuous belt of forest.

b. Sensitive Areas Ordinance

The City of Brier adopted a Sensitive Areas Ordinance in February 1992, to comply with requirements of the State Growth Management Act. The Ordinance provides regulations to protect environmentally sensitive areas such as wetlands, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas. The environmentally sensitive areas have been mapped in Figures 6 through 8. These maps are intended to depict the general location of environmentally sensitive areas for planning purposes. The maps are not intended as a substitute for site-specific investigation required at the time of a development proposal.

The Sensitive Areas Ordinance specifies protective buffers and development setbacks for the preservation of environmentally sensitive areas. However, it is not anticipated that the regulations will significantly reduce the buildable area or residential land capacity in the City. Generally, the large lot sizes that are required in the City are expected to provide for a sufficient area to both preserve sensitive areas and accommodate single-family housing development. This assumption pertains generally to land planning on a city-wide scale, for the purpose of estimating the buildable land capacity in the City. Site-specific limitations can only be determined after a thorough on-site investigation of sensitive areas and review of specific development proposals.

c. Snohomish County Shoreline Management Master Program

Swamp Creek is the only shoreline in the Brier Planning Area that is identified as a stream of statewide significance, from its confluence with Scriber Creek to its mouth at the Sammamish River. Swamp Creek flows just east of the Brier City Limits and is within the proposed City Planning or Sphere of Interest Area. Figure B-7, page 13 in the Land Use Element Appendix A, shows the stream course of Swamp Creek in relation to the City of Brier. The Snohomish County Shoreline Management Master Program designates the Snohomish County portion of Swamp Creek as Suburban Environment, recognizing that residential housing currently exists along its shores (within the 200 foot protection zone of either side of the banks of the creek).

FIGURE 1 - NATURAL ENVIRONMENT - DEVELOPMENT CONSTRAINTS

FIGURE 2 - SENSITIVE AREAS - GEOLOGIC HAZARDS

FIGURE 3 - SENSTIVE AREAS - FISH AND WILDLIFE CONSERVATION AREAS

FIGURE 4 - SENSITIVE AREAS - WETLANDS

2. Built Environment

a. Land Use Inventory

The Growth Management Act requires the preparation of a Land Use Element that identifies the existing general distribution and location of various land uses, and the approximate acreage and range of density of existing land uses.

The inventory of existing land uses can be used to gage the proportion of total land area that the city may need to devote to each land use in the future. The existing proportions and distribution of land uses may be adjusted for shifts in the desires or needs of citizens, or to accommodate projected future needs. This section compares the capacity of existing land use designations with projected needs.

The City of Brier is almost entirely composed of low density single-family residential development. There are two residential zoning designations (RS 12,500 and RS 20,000) which comprise approximately 90% of the area of the City. The purpose of the residential use designations, as stated in the Zoning Ordinance (5/91), "is to provide an area for single family residential development, while retaining Brier's semi-rural character and lifestyle."

There are presently 2.6 acres designated for Neighborhood Business (BN). This commercial designation is located on Brier Road, a major traffic street in the city. Presently, approximately .6 acres of the designation is developed with commercial uses, and 2 acres are vacant. The Neighborhood Business (BN) designation is intended to provide goods and services for the every-day needs of the immediate neighborhood area, rather than provide for larger commercial needs.

Other land uses estimated in Brier include; Parks, Open Space, Community Facilities (OS)- 48.5 acres, and Cemetery Use (UC) - 58 acres. There are no sites, structures, or lands with historical or archaeological significance within Brier.

Table 1 below provides the approximate acreage of various land use types present in the City of Brier.

TABLE 1
Existing Land Use Types - Acreage

Land Use	Total Acres	% of Total Area of City
Total Residential Land	1,100[1]	87.4%
RS 12,500 Single Family	+/- 948	
RS 20,000 Single Family	+/- 152	
Neighborhood Business	2.6[2]	.2%
Schools	20[2]	1.6%
Cemetery Use	58[2]	4.6%
Parks, Community Facilities	48.5	3.8%
Public Utilities	30[2]	2.4%
Total	**1,259.1**	**100%**

Sources:
1 DEA Traffic Element - 7/91
2 Comprehensive Plan - Existing Conditions - 2/89

The Draft Comprehensive Plan prepared by R.W. Thorpe & Associates, November 1986, included land use inventory information on the City and a large study/interest area. This information is provided in Appendix B for background purposes.

City Planning or Sphere of Interest Area (Urban Growth Area)

The City Planning or Sphere of Interest Area proposed by the City of Brier includes approximately 1,800 acres. There are not sufficient funds available at this time to provide an accurate land use inventory of existing land use types in the City Planning or Sphere of Interest Area.

b. Population

The following table provides data on historic population levels and growth projections for the 20 year planning period.

TABLE 2
Historic Growth And 2012 Population Projection

1980[1]	1990[1]	% inc. avg./yr	1992 est.[2]	% inc. avg./yr	2012 Pop Projection[3]	% inc. avg./yr
2,915	5,210	78.7% 7.87%	5,760	10.5% 5.28%	7,200	25.0% 1.25%

1 - U.S. Census

2 - 1992 population estimate equals the State Office of Financial Management (OFM) April 1, 1992 estimate plus any population annexed by the City between April 1, 1992 and February 28, 1993 as reported by OFM.

3- The 2012 population forecast is based on the February 1993 Puget Sound Regional Council (PSRC) Vision 2020 Alt. #1 forecast, adjusted to add the Office of Financial Management (OFM) 2012 population projection for Snohomish County. The forecasts were distributed using the County's POPUL model. This forecast represents an initial city target, to be further evaluated once UGA boundaries are finalized and analysis of developable land supply and capital facilities capacity is completed.

Table 2 above indicates that the projected rate of future population growth in the City of Brier is less than the historic growth trends. In the 10 year period between 1980 and 1990, the population of Brier grew by 78.7%, for an average annual growth rate of 7.87%. Population forecasts for the Comprehensive Plan are estimated for the 20 year timeframe of the Plan. The projections forecast an additional 1,440 people in Brier, an increase of 25% (from the 1992 estimate of 5,760) over the 20 year planning period. This equals an average annual increase of 1.25%. The population that is projected for Brier is less than historic growth trends because of assumptions in the PSRC 2020 Alt. #1 econometric model. One assumption in the model was that a higher proportion of future growth in the region would be concentrated into designated urban centers. Also, the model took into consideration "developable land" or the capacity of land that remains available for development within cities.

c. Population Projections and Residential Land Area Requirements

The population of Brier is projected to grow by 1,440 people over the 20 year planning period. According to the 1990 census, the average household size in Brier was 3.12 people per household, compared to the countywide average of 2.68 people per household. Demographic trends indicate that average household sizes will decrease in the future. Assuming that the average household size in Brier decreases to 3.0 people per household, Brier may anticipate 480 additional households (1,440 population/3.0 people per household) over the 20 year planning period.

In order to calculate the residential land area required to accommodate future population growth, the 2012 population target of 1,440 people or 480 additional households is divided by the existing, average residential density estimated at 3.30 dwelling units per acre. This average considers the proportional areas and residential densities of Brier's two single family residential designations, RS 20,000 – 152 acres (2.18 dwellings/acre) and RS 12,500 – 948 acres (3.48 dwellings/acre).

480 households or dwelling units / 3.30 dwelling units per acre = 145.5 acres

Therefore, approximately 145.5 acres is necessary to accommodate the population growth projected for the City of Brier over the 20 year planning period.

d. Residential Land Capacity

The Growth Management Act (GMA) requires jurisdictions to provide sufficient land to accommodate projected population growth and future land needs for the succeeding 20-year planning period. City jurisdictions need to consider the land supply and capacity within their city limits and established Urban Growth Area (UGA). Both residential and non-residential land requirements should be considered in this assessment of land capacity.

The following analysis evaluates the residential land supply and theoretical residential capacity within the Brier City Limit. It then compares the existing residential capacity to the residential land area required to accommodate the projected population. The "Land Capacity Methodology For Residential Land," July 1992, accepted by the Snohomish County Tomorrow Steering Committee, has been used in this analysis.

The City of Brier has approximately 1,100 acres of land designated for residential use within the city limits. Approximately 135.6 of these acres are vacant. The estimate of vacant land acreage is taken from the Comprehensive Transportation Plan completed by David Evans and Associates, July 1991. The methodology and assumptions follow:

• 1980 - 470 acres of residential land were vacant. (Draft Comprehensive Plan, Nov. 1986)
946 housing units (Office of Financial Management, 1990)

• 1990 - 1,899 housing units (OFM,1990), an increase of 953 housing units from 1980
953 / 2.85 dwellings per acre (Draft Comp. Plan, Nov. 1986) = 334.4 additional acres developed

470 acres - 334.4 acres = 135.6 vacant acreage estimate

Brier has an average residential density of approximately 3.30 dwelling units per acre. This considers the proportional area covered by the two residential designations in the City: RS 12,500 (3.48 dwelling units/acre) and RS 20,000 (2.12 dwelling units/acre). With an estimate of 135.6 vacant acres, approximately 447 additional housing units can be accommodated on the vacant residential land in Brier.

135.6 vacant acres X 3.30 dwelling units/acre = 447 housing units

This provides only a theoretical, maximum estimate and there are several factors that will affect the theoretical residential capacity and warrant consideration:

• The theoretical housing capacity will be reduced after subtracting land for public rights-of-way and other public purpose lands.

• There may be a reduction in the housing capacity due to development limitations on environmentally sensitive lands.

• The theoretical housing capacity does not consider adjustments for market feasibility, and assumes that all the vacant acreage in Brier will be developed to the maximum density permitted under existing zoning regulations.

• There is also the consideration of additional residential capacity due to the potential of redevelopment in the City. Redevelopable land consists of partially-used parcels that contain enough land to be further subdivided under the existing zoning. For example, a five acre parcel with a single house may be further subdivided in a residential zone designation that permits 12,500 square foot lots.

For purposes of this study, it is estimated that the adjustment factors listed above would generally balance out to be close to the theoretical residential capacity. It is beyond the present scope of detail of this study to evaluate the considerations further.

e. Summary Comparison of Residential Capacity and Projected Population

The City of Brier has a residential land capacity to accommodate approximately 447 additional housing units on the estimated 135.6 vacant acres within the City. Population projections for the 20 year planning period forecast 480 additional households. The City anticipates that there is a sufficient capacity to accommodate projected population with the development of vacant land along with the redevelopment of existing large lot parcels.

f. Existing and Projected Employment

The 1990 employment estimate for Brier is 203. The employment target for 2012 is 400, for a net change increase of 197 over the planning period. The 1990 estimate is based on the Puget Sound Regional Council (PSRC) 1990 FAZ employment distribution derived from Washington State employment Security Department data, and disaggregated to jurisdictions using the Snohomish county Planning Department's 1990 Employment Security data base. The 2012 employment forecast was prepared by the Planning Advisory Committee (PAC) of Snohomish County Tomorrow. The employment forecast is based on the PSRC Vision 2020 Alternative #1 FAZ forecast distribution for the year 2012, and disaggregated to jurisdictions using the Snohomish County Planning Department's employment correspondence table which related FAZ employment data to smaller units of geography.

Presently, employment in Brier is permitted in the residential zone designations as home occupation businesses, and in the Neighborhood Business (BN) land use designation. A home occupation must be carried on by resident(s) of the dwelling with not more than 3 non-resident persons employed on a full-time basis. The Neighborhood Business (BN)

designation is 2.6 acres, with approximately .6 acres presently developed with commercial uses.

The 1993 Draft Comprehensive Plan does not propose any changes to the land use designations, and thereby does not increase or decrease the existing capacity to accommodate additional employment that is forecasted for the City.

III. LAND USE ELEMENT GOALS AND POLICIES

GOALS

LU 1 To accommodate the amount of population growth forecasted by the State Office of Financial Management and Snohomish County for the City of Brier over he 20-year term of the Plan.

LU 2 To coordinate with surrounding jurisdictions and Snohomish County in delineating Urban Growth Areas sufficient for projected urban growth levels. Urban Growth Areas shall include only those areas which may be feasibly provided with future urban services over the 20-year term of the Plan.

LU 3 Control and direct growth in a manner that enhances the community qualities and values.

LU 4 Encourage development where adequate public facilities and services exist or can be provided in an efficient manner.

POLICIES

1. General Policies

G-1 The Land Use Plan Map adopted in this Plan shall establish the future distribution, extent, and location of generalized land uses in the City. The Land Use Plan designations on the map are defined as follows:

Single-Family Residential – Areas appropriate for single-family residential development, retaining Brier's semi-rural character and lifestyle. Density for residnetial use shall not exceed 1 residence per 12,500 square feet.

Neighborhood Business – Areas intended to permit those uses which provide for the every-day needs of the immediate neighborhood area, maintaining a limited intensity of land use and a scale and character of development that is compatible with the neighborhood residential areas.

Park – Areas intended to be preserved for parks, open space, and greenbelt purposes including but not limited to: natural areas and natural features with scenic or recreational value; lands that may provide public access to water bodies or natural areas, lands that visually or physically connect natural areas or provide important linkages for recreation and wildlife areas, or environmentally sensitive areas. Environmentally sensitive areas located on private lands are not included in the Park designation of the Comprehensive Plan unless dedicated or purchased for this purpose.

Cemetery – Areas intended for cemetery use; including the subdivision into burial lots, the construction and maintenance of monuments, mausoleums or other related structures.

G-2 Encourage the development of a well planned residential city which is free from nuisance and physical hazard and which provides for the general health, safety, welfare and security of its resident.

G-3 Maintain the quality of life values for the City's single family residential citizens.

G-4 Protect and encourage the development of the residential areas in a manner consistent with low density patterns already established. The population density should therefore conform to the established pattern of 12,500 square feet. No higher densities are planned in order to maintain the established pattern and so as to adequately preserve the public health, welfare and safety of Brier residents.

G-5 Make the most beneficial use of and for residential purposes while preserving the essential land established nature and character of the residential community.

G-6 Since Brier is essentially a low density community; commercial, multifamily and industrial type development is inconsistent with the well established land use patterns. These uses are not compatible, and therefore not permitted.

G-7 Recognize the environmental base maps of the Brier Planning area which illustrates the location and extent of natural amenities and use these maps as a general planning guide.

G-8 Insure the preservation of land for a variety of open space uses within the City.

G-9 Protect and enhance existing natural resources and environmentally sensitive areas.

G-10 Pursue and support development in the City of Brier and the City Planning or Sphere of Interest Area which makes a positive contribution to the area and which are consistent with the goals of this plan.

G-11 Manage and guide growth to conform with this plan and to ensure orderly physical development, resource conservation and preservation.

G-12 Annexation requests will only be considered within the planning area when they are consistent and compatible with this plan and the established pattern of growth in Brier.

G-13 Transportation needs will be addressed to best serve the residents of Brier without compromising the quiet residential atmosphere of the city. Transportation issues will be handled so as to discourage nonlocal traffic and to promote the safe movement of Brier residents utilizing all modes of travel including horses.

G-14 Establish a neighborhood traffic control program to address the concerns of Brier residents and to encourage safe road systems.

G-15 Provide the most effective service levels needed as efficiently as possible.

G-16 Avoid fiscal expenditures from the city budget which are not directly related to the advancement of the goals of this plan and support Brier's commitment to remaining a residential community without commercial, multifamily or industrial development.

G-17 Provide a planned and coordinated utility system.

G-18 Design, locate and construct utilities to avoid significant adverse environmental impacts and to protect valuable environmental features.

G-19 Provide through design review process with the owner/developer, incentives to provide the City with flexibility in order to achieve design goals, amenities or desired objectives.

G-20 Conditional Use Permits, street vacations, variances, and other special applications from established codes and ordinances shall be allowed only when there is an overriding and permanent public benefit consistent with the Goals and Policies of this Comprehensive Plan.

G-21 Commercial land use shall not be allowed in Brier except for the existing 2.6 acre neighborhood business zone. Home occupations may be allowed when in conformance with the goals and policies of the plan and not detrimental to the residential character of Brier's neighborhoods.

2. Residential

General

R-1 Residential densities shall not average less than the 12,500 square feet minimum lot size.

R-2 Landscape buffering should be provided by nonresidential users when adjacent to residential uses to preserve single family residential home values.

R-3 Use natural features such as topography and vegetation to separate other land uses from residential areas.

R-4 Utilize open space areas such as natural vegetative easements and parks to separate incompatible land uses from the residential areas.

R-5 All developments should contribute their fair share to parks, street improvements, signalization and sidewalks for project mitigation.

R-6 Encourage at the time of subdivision, and with other developments where possible, easements through properties for trail systems.

R-7 Consider the development of policies to address the needs of the elderly housing in the community (e.g. housing for persons over 55 years old, handicapped, etc.)

Single Family

SF-1 Preserve and protect the existing residential character of the City with large lots consistent with the established minimum lot size of 12,500 square feet.

SF-2 Prohibit spot zoning in the established residential neighborhoods of the city.

SF-3 Recognize that historically home businesses and occupations have contributed to the livelihood and quality of life of many of our residents and the unique semi-rural nature of our community. Therefore, home businesses and occupations can be compatible with single family zoning in Brier as long as they comply with all ordinances and other laws governing all Brier citizens regarding sensory, safety, land use and other impacts on their neighbors and the community, and do not adversely impact or be inconsistent with the goals and policies of this Comprehensive Plan.

SF-4 Specific performance standards for home businesses and occupations shall be established as part of the Plan. Existing home business and occupation uses which are determined to be incompatible with performance standards should be amortized. No new incompatible home business licenses shall be issued.

SF-5 Consider the need in the community for elderly housing (i.e. Handicapped and Elderly) and their provision by Conditional Use permit in the Zoning Code.

Residential Design

RD-1 The City Comprehensive Plan, Zoning and Subdivision Ordinances should emphasize the RS 12,500 SF as the zoning for single family homes in Brier.

RD-2 Site characteristics that enhance residential development such as trees, watercourses and similar amenities should be preserved through creative design.

RD-3 When feasible, residential development should be planned to enhance usability and privacy of yards, preserve views and consider solar access.

RD-4 Encourage housing designs which provide for the visual surveillance of public spaces both from dwelling units and from the street.

RD-5 Provide for adequate lighting of residential streets and parking lots.

RD-6 Encourage preservation and enhancement of open space and planting of natural vegetation by residential property owners.

RD-7 All development in the City of Brier shall be consistent and compatible with single family homes and shall not be industrial or commercial in nature. Commercial/neighborhood business operations shall be confined to the existing 2.6 acre neighborhood business zone.

3. Commercial

General

C-1 Promote a well planned unified "community center" for the neighborhood business zone which serves the local residents of Brier. All development should be well buffered from adjacent single family uses.

C-2 Promote development which does not increase nonlocal traffic or create other adverse impacts.

C-3 Encourage a diversity of compatible uses to promote maximum occupancy.

C-4 Discourage scattered retail or incompatible development of the neighborhood business zone.

C-5 Establish a design review process (through Planning Commission and City Council) with set performance standards for the neighborhood business zone. Performance standards should protect and promote the surrounding single family character and natural environmental amenities.

C-6 On site and off site improvements and utilities as well as any adverse impacts, including traffic from any new development, shall be the responsibility of the site developer/user. Appropriate mitigation measures shall be agreed upon prior to development.

C-7 Commercial development in the Neighborhood Business zone shall be compatible and not adversely impact the surrounding residential community.

C-8 Commercial development in Brier shall be confined to the 2.6 acre site currently zoned neighborhood business. Additional or expanded commercial use shall not be allowed.

Neighborhood Business Zone Standards

CS-1 Encourage aesthetic building and site design to enhance and compliment surrounding residences. Noise, light and glare, hours and type of operation and other performance standards will be compatible with the single family character of Brier.

CS-2 Promote attractive and interesting shopping and dining opportunities for the citizens of Brier within the existing neighborhood business site.

CS-3 Discourage development that attracts traffic from outside Brier.

CS-4 Site plans should include design considerations for landscaping, building orientation, vehicular circulation, transit access, and other measures.

CS-5 Provide design flexibility in development by offering a planned unit development approach or incentives/bonus program intended to protect the natural landscape and

environmentally sensitive areas. The planned unit development should also provide amenities for its residents and sensitivity to its neighbors.

CS-6 Signs for buildings in the Neighborhood Business zone shall be limited in size and be made of wood or other approved material. All signs should be generally attractive and compatible with the design review guidelines for signs. Signs should be compatible in design and scale with the surrounding low density residential atmosphere.

CS-7 Any development in the Neighborhood Business zone shall provide "people spaces" which are pedestrian and equestrian oriented. Safe, convenient and accessible sidewalks and trails shall facilitate getting to and from the stores.

4. Urban Design

UD-1 Establish SEPA and design review standards and guidelines for all commercial and special uses and for all residential plats exceeding four lots or four lot potential. Design review standards for the City of Brier shall be consistent with the goals and policies of this Comprehensive Plan.

UD-2 Create a gateway image at the entry ways to the city which provides a sense of arrival and welcome.

UD-3 Encourage the use of natural vegetation to enhance aesthetic and environmental quality of the city.

UD-4 Preserve existing natural landscaping wherever possible.

5. Natural Environmental And Open Space

Environmental Constraints

E-1 Land use and zoning should reflect environmental constraints.

E-2 The City of Brier shall preserve and protect environmentally sensitive areas to support important ecological functions and to avoid potential hazards to life and property. The Sensitive Areas Ordinance (Ordinance No. 252) shall provide the regulations to implement this policy. The following environmentally sensitive areas are addressed in the Sensitive Areas Ordinance:

Wetlands
Fish and Wildlife Habitat Conservation Areas
Frequently Flooded Areas
Geologically Hazardous Areas
Areas with unstable or defective soil permeability.

E-3 Maintain the natural wooded character of environmentally sensitive areas, greenbelts, gateways, etc.

E-4 As slopes increase, development intensity, site coverage and vegetation removal should be discouraged to reduce problems of erosion, landslides, siltation and drainage.

E-5 In areas susceptible to erosion, native ground cover should be retained if at all possible or replaced immediately after construction. Limitations on the time when site work can demonstrate that slopes will be stable after site modifications.

E-6 Discourage development in areas where slopes are known to be unstable. In areas where the stability of slopes are in question, allow development only after a qualified professional can demonstrate that slopes will be stable after site modifications.

E-7 Discourage development on slopes in excess of 30 percent.

Natural Land Forms

N-1 Preserve and promote the quality of natural landforms.

N-2 Strive to preserve steep hillsides and wooded areas in a scenic natural condition. Encourage replanting of denuded areas to enhance the scenic amenities of Brier and decrease the potential erosion hazards.

N-3 Discourage filling, grading or excavations of land when not in conjunction with the actual development of the land.

N-4 Recognize the advantages and opportunities afforded by the topography and plan its use accordingly. Discourage alteration of natural topography.

Water Resources

W-1 Protect and preserve water quality, natural drainage, fish and wildlife habitat and the aesthetic functions of streams.

W-2 Strive to preserve steep hillsides and wooded areas in a natural vegetated or wooded condition. Encourage replanting of denuded areas to decrease potential erosion hazards.

W-3 Preserve streams and stream corridors in a natural condition.

W-4 Enhance and maintain natural drainage systems to protect water quality and quantity of storm water runoff.

W-5 Require that all development adjacent to streams protects and preserves an undisturbed corridor to maintain a natural state.

W-6 Maintain natural drainage courses wherever possible.

W-7 Piping and tunneling of water should be discouraged, or allowed only when going under a road. Bridging is encouraged over use of culverts for stream crossings. Where piping or tunneling is necessary use oversized culverts.

W-8 Recognize the importance of all levels of vegetation (i.e.) trees, shrubs, understory) in regard to the drainage system.

W-9 Encourage the preservation and protection of marshes, ponds and water courses for open space purposes and include them in the open space systems.

W-10 Encourage open shallow ponding with slopes less than 3:1 for storm water detention and multiple use (i.e.: playfields, parking, etc.).

W-11 Protect the aesthetic habitat values of wetlands.

W-12 Protect natural vegetative buffers along waterways to the maximum extent possible.

W-13 The City shall coordinate with the Snohomish County Shoreline Management Master Program concerning development proposals along Swamp Creek or other shorelines of statewide significance.

W-14 Protect wetlands and wetland buffers to preserve wetland functions and values such as flood attenuation, wildlife habitat, water quality improvement, groundwater exchange, etc…This shall be accomplished through enforcing regulations in the Sensitive Areas Ordinance.

Open Space/Natural Land

OS-1 A wide variety of lands should be preserved for park, open space, and greenbelt purposes including but not limited to:

1. Natural areas and natural features with scenic or recreational value;

2. Land that may provide public access to water bodies, natural areas and parks;

3. Lands which define through their natural features, land use boundaries and city boundaries;

4. Lands that visually or physically connect natural areas or provide important linkages for recreation and wildlife habitat, and;

5. Environmentally sensitive areas, including severe landslide hazard areas, steep slopes, floodways of 100-year floodplains, wetlands, stream corridors, and habitat for established, threatened, endangered or highly sensitive wildlife species.

OS-2 Open space or natural areas should be encouraged to buffer differing types of land uses.

OS-3 Lands preserved for open space should provide multiple open space benefits whenever possible including active or passive recreation opportunities, scenic amenities, fish or wildlife habitat.

OS-4 Areas designated as parks and open space should be preserved through incentives, trades, purchase of land, easements, or transfer of development rights.

OS-5 Adjacent development should relate to each other in manner that will allow major areas of open space to be combined for their visual effect.

OS-6 Zoning regulations should offer the City some limited flexibility in their design requirements when developers offer to set aside a portion of their property in a planned unit development for open space along with other mitigating improvements.

OS-7 Designate waterways and adjacent lands and wetlands as open space which cannot be built upon or impacted in such a way as to degrade the natural area.

OS-8 Incorporate water resources into the open space network.

OS-9 Discourage the disturbance of vegetation when not in conjunction with the actual development (i.e. establish tree preservation policies and ordinance).

6. Vegetation

V-1 A Tree and Ground Cover Removal Ordinance should be completed and implemented as soon as possible. Any clearing of vegetation should be selective and removal severely limited to maintain adequate erosion control and in order to preserve the rural character of the City and the goals and policies of this Comprehensive Plan.

V-2 Provide that all land development include reseeding and replanting of cleared or poorly developed areas of vegetation to maintain a naturally green landscape, to ensure adequate erosion control and that such provisions be included as part of the clearing and subdivision ordinance.

V-3 Douglas fir's sporadic (every three or four years) seed crop production and its need for a warm seed bed situation makes natural germination a slow unpredictable process. Therefore, Douglas fir seedlings should be planted in open areas to give them a competitive edge over alders. Douglas fir will suppress alder, thereby reducing the time for natural succession to a subclimax forest.

V-4 Planting of the more drought-tolerant Douglas fir and red cedar should be undertaken in City-owned spaces that contain large stands of fully aged alder. This will insure that, as the short-lived alder dies, already established cedar and Douglas fir will take its place, producing longer-lived, more stable and more aesthetically pleasing greenbelts.

V-5 To minimize erosion, silting of streams, clogging of storm sewers, and other related problems, existing trees and ground cover should be maintained where possible, not removed or buried. Selective clearing, reseeding and replanting practices can help minimize these problems and should be included in a clearing ordinance.

V-6 Brier has several fragile ecosystem areas such as marshes, bogs, streams, and other areas that support unusual groupings of plants and animal species. These areas should be further inventoried in the Park Plan. Some should be included in open space planning or developed as private open space tracts, through the open space option of the subdivision ordinance.

V-7 Recognize that noise and visual pollution can be minimized by both retaining belts of vegetation and by replanting a mixture of trees and shrubs around high noise generators such as arterials, schools, recreational sites, etc. Further studies are recommended concerning noise and visual pollution problems in the community, toward development of plans to retain or replant vegetation areas as well as replant noise and visual screens.

V-8 A City wide landscape plan should be developed as part of the Park Plan to provide a basis for:

a. Further inventories of vegetation.
b. Open space planning and acquisition proposals.
c. The specification of areas to be acquired to provide essential elements to the trail system with linkages to activity nodes.
d. Development of noise and visual buffers.
e. Evaluating the impacts of any new development on the natural elements and environmental systems.

V-9 Use greenbelts and vegetation to reduce noise and visual pollution and encourage natural buffering between land uses.

7. Annexation

A-1 Annexations within the City Planning or Sphere of Interest Area (UGA) and contiguous to the city boundaries will be consistent with Brier's Comprehensive Plan and Zoning Ordinances in addition to state law and guidelines of the Snohomish County Boundary Review Board.

A-2 Any annexation proposal should undergo vigorous examination of service boundaries, fiscal impacts, environmental values and compatibility with existing and contiguous parts of the city.

A-3 Annexations to the City of Brier should conform to the single family zone minimum lot size requirement of 12,500 SF.

A-4 Annexation of established residential units shall require owner/developer to commit to sewer, street and sidewalk improvements and any other improvements deemed necessary by the Brier Planning Commission and City Council.

APPENDIX A

NATURAL ENVIRONMENT CONDITIONS

NATURAL ENVIRONMENT

The following text and map information on natural environment conditions in Brier is taken from the 1989 Comprehensive Plan, Existing Conditions and Other Studies. The information is still considered accurate and pertinent. The mapping encompasses a larger study/interest area than what is now included as Brier's City Planning or Sphere of Interest Area.

A. Earth

1. Geology

The City of Brier and the study/interest area are located in the Puget Lowlands, a large land trough bounded on the east by the Cascade Mountains and on the west by the Olympic Mountains and Vancouver Island. It extends from the Fraser Valley in British Columbia, Canada to the Willamette Valley in Oregon.

During the late Pleistocene Age of the Quaternary Period, a change in climate occurred, suitable for the development of glaciers. At least four distinct major glaciers developed in Canada and moved into the Puget Lowlands. The Vashon glacier was the last glacier to extend into the area, and is most responsible for its geology.

The advancing Vashon glacier reached a thickness of over 4,000 feet and extended about 60 miles south of Seattle. Vashon glaciation in the Brier vicinity consisted of a single advance. As the glacier moved over the area, streams of meltwater flowing from the sediment-laden ice deposited stratified stream and lake deposits (glacial outwash) in front of the glacier. These deposits are often called "advance stratified drift". As the ice overrode the outwash materials, the surface was plastered with deposits of sand, gravel and a concrete-like material called "till".

The front of the Vashon glacier began melting about 14,000 years ago. As the ice melted during glacial retreat, much of the till was covered with a new layer of outwash material, often referred to as recessional stratified drift. None of this deposit occurs in the Brier study/interest area. Since Vashon glaciation, geologic deposition has mainly been alluvial valley filling, localized peat deposition, and lake sediment deposition. Figure B-1 illustrates the location of the surficial geologic units found in the Brier study/interest area.

FIGURE B1- GEOLOGY

2. Topography

Regionally, the Brier study/interest area lies on the Intercity Plateau of the Puget Lowlands. This plateau is comprised of north-trending highlands, also referred to as plateaus,, formed by the advancing and retreating Vashon glacier. One such plateau occupies much of the City of Brier, particularly the western 2/3 of the City. It reaches its highest elevation (460 feet) to the north of 228th Street and west of Brier Road. The slope gradient of this plateau is generally slight, with slopes of 0 to 10 percent predominating. North and west facing slopes range from 11 to 25 percent, while on the east side of the plateau, some locations have 26 to 40 percent slopes, and exceed 40 percent in few areas. This plateau is straddled on the north by Scriber Creek, which lies in a gently sloping valley. To the east lies Swamp Creek, which has eroded a major drainage pattern into the landscape. The valley which Swamp Creek has carved is the Brier study/interest area's major physiographic feature and divides the planning area into two distinct areas, often acting as a barrier to circulation.

To the east of Swamp Creek lies the Upland Plateau. This plateau of Vashon till reaches an elevation of 500 feet, the highest in the planning area. The Queensborough neighborhood largely lies on this plateau, offering in some locations of the neighborhood sweeping views of the North Creek Valley and the Cascade Mountains to the east and Mount Rainier to the South.

The Upland Plateau, which is approximately 2/3 of a mile wide and two miles long (north-south elongation), is largely flat-topped with slopes of 0 to 10 percent. The plateau's east side gradually loses elevation with slopes of 11 to 25 percent predominating. By contrast, the west side, as it slopes to Swamp Creek, is comprised of slopes exceeding 40 percent, particularly east of the Kenmore Gun Range, north of 228th Street.

This interesting blend of plateaus, vestiges of the Vashon glacier, and the more recent erosional processes, such as the Swamp and Scriber Creek drainage courses, gives an overall topographic appearance of rolling hills, physiographically separated by water courses. These features are mapped in Figure B-2, and an analysis of the slopes in the area is shown on Figure B-3. Figure B-4 is a conceptual diagram showing a topographic section of Brier, with soils, hydrologic and land use relationships.

FIGURE B2 TOPOGRAPHY

FIGURE B3 - SLOPE

FIGURE B4 - TOPOGRAPHIC SECTIONS

3. Soils

A total of 19 soil types occur in the Brier study/interest area. Sixteen of these soils fall within one of eight soil series, while three [pits (51), urban land (7.8), and xerorthents (82)] have had their surface layer, subsoil, or substratum altered or covered to such a degree that identification within a series is not feasible. A soil series consists of soils that have similar horizons or layers in their profile. The horizons are similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. The texture of the surface layer or of the substratum can differ within a series. Following is a description of the eight soil series of the planning area and the soil types that occur in each. For more specific information on each soil, refer to Soil Survey of Snohomish County Area, Washington, July 1983. These soils are mapped in Figure B-5.

Alderwood Series (1, 2, 3, 4, 5, 6)

The soils of the Aderwood series formed in glacial till and are the most common of the soils in the study/interest area. These soils are moderately deep and moderately well drained. The surface layer is gravely sandy loam. The subsoil is very gravely sandy loam. A weakly cemented hardpan is at a depth of about 35 inches, but can range from 20 to 40 inches. The main limitations for homesites and septic tank absorption fields are the high depth to the weakly cemented hardpan and wetness because of the seasonal high water table.

Bellingham Series (7)

The Bellingham series consists of very deep, poorly drained soils in depressional areas. These soils formed in alluvium and lake sediment. Permeability is slow and available water capacity is high. As a result, run-off is low, erosion hazard is slight, and ponding occurs from November to June. The main limitations for homesites are the seasonal high water table and high shrink-swell potential.

Everett Series (17, 18, 19)

The soils of the Everett series formed in glacial outwash (advance stratified drift) and occur on terraces and outwash plains. These soils are very deep and somewhat excessively drained. This series is suited to urban development, with main limitations for homesites and septic tank absorption fields being steepness of slope.

Indianola Series (26)

The soil of the study area within this series is the Indianola loamy sand of 15 to 25 percent slopes. These slopes are its main limitation to urban development. Otherwise its characteristics are very similar to the Everett series, forming in a more sandy glacial outwash. It is very deep and somewhat excessively drained.

Kitsap Series (27, 29)

The Kitsap series consists of very deep, moderately well drained soils on terraces and terrace escarpments. These soils formed in lacustrine (lake) sediment. Permeability is slow with a high water holding capacity. A seasonal perched water table occurs at a depth of 18 to 30 inches from December to May. This water table is its main limitation for urban development and where slopes are steep.

McKenna Series (32)

The soil of this series occurs in depressional areas and drainage ways on till plains. It formed in glacial till. A seasonal perched water table is at a depth of 0 to about 6 inches and ponding occurs from November to April. Compact glacial till is at a depth of 33 inches and the effect of this layer on use and management is similar to that of hardpan.

Mukilteo Series (39)

Mukilteo muck is a very deep, very poorly drained soil in depressional areas. It formed in organic material derived primarily from sedges. As such, this soil is not suited to urban development.

Norma Series (39)

The Norma loam of this series formed in alluvium and occurs on the site in depressional areas on outwash plains and till plains. A seasonal high water table occurs at a depth of 0 to about 12 inches and ponding occurs from November to April. This unit is poorly suited to urban development.

Other Soils

51-Pits: This map unit consists of gravel pits, sand pits and rock quarries.

78-Urban Land: This map unit consists of nearly level gently sloping areas covered by streets, buildings, parking lots and other structures that obscure or alter the soils so that identification is not feasible.

82-Xerothermic level: This unit consists of areas where the surface layer, subsoil and substratum have been greatly disturbed, removed, or replaced with other soil material. Properties are highly variable within short distances.

FIGURE B5 - SOILS

TABLE B1 - SOIL CHARAC

B. WATER

1. Surface Water

The Brier study/interest area lies within three drainage basins or watersheds (see Figure B-7). Stormwater run-off in the western portion of the City of Brier flows into Lyon Creek, which is just outside Brier in Mountlake Terrace. The majority of the run-off of the planning area flows into Swamp Creek and Scriber Creek, which together comprise the Swamp Creek watershed. Run-off in the interest area (Study Area 5) predominantly flows eastward into North Creek in Canyon Park.

The headwater area of Lyon Creek is in Mountlake Terrace to the west of Brier. This stream flows in a southerly direction into Lake Washington.

Scriber Creek originates from Scriber Lake in Lynnwood and flows southeasterly, entering Swamp Creek near Cypress Way, north of Cypress Heights. Several swampy areas occur along Scriber Creek in the vicinity of the northern tier of Brier from Poplar Way to Brierwood.

Swamp Creek originates from Stickney Lake about eight miles south of Everett. It flows southerly through the planning area to empty into the Sammamish River in Kenmore. The mean annual flow is 33.4 cubic feet per second (Kenmore Station), qualifying it as a stream of statewide significance under the Shorelines Management Act. The channel is deep enough to accommodate peak flow, which in any given day can be as much as 487 cfs.

Swamp Creek enters the Brier study/interest area west of Larch Way and east of Cypress Way. The lot sizes through which it flows are large, ranging from 2.5 acres to 5.5 acres. These parcels are largely forested; only a few have homesites. The old Larch Way road right-of-way is located along the west side of Swamp Creek in this area. A permit was granted to the Snohomish County Parks Department in the 1970's for development of this right-of-way into a trail.

Scriber Creek flows into Swamp Creek to the east of Brier along Cypress Way. Swamp Creek, at this point of statewide significance, meanders southward through more forested, largely undeveloped lots, flowing under Locust Way into the city limits of Brier for a short distance. In this vicinity, southward, housing density within the 200 foot protection zones becomes considerably greater than in the northern portion. Bridges are the principal means by which the creek is allowed to pass beneath roads. South of 228th Street S.W., Swamp Creek passes by an old gravel pit on its east bank (near Wandering Glen Estates and Meadow Creek Park). It parallels Carter Road through large lots, many of which are vacant and forested, eventually flowing beneath Carter Road in the southern portion of the study/interest area. The bridge which crosses the creek on Carter Road failed in January 1986 due to flood waters. The creek leaves Snohomish County and enters King County at Lockwood Road, where land use (mostly residential) is more intense.

The City of Brier owns the shorelines of Scriber Creek from the Brierwood development near the City's northern boundary to the point where the creek leaves the City at its eastern border.

Most of the interest area and a portion of the study areas lies within the North Creek watershed. Run-off here drains to North Creek, which also has its head to the north and flows southerly, through Koll, Quadrant and Truly Properties entering the Sammamish River just west of the I-405/Bothell Way interchange at Bothell.

Two bodies of water occur in the planning area. A relatively large reservoir lies in Abbey View Memorial Park. It is a catchment basin and does not have an outlet. Another reservoir is located in Wandering Creek, north of 240th Street S.W. It, too, acts as a catchment basin for nearby drainages and has no outlet. A small pond occurs east of Locust Way and south of Locust View Ridge, partially within the City of Seattle Skagit Transmission Line right-of-way.

2. Ground Water

The occurrence of ground water is closely tied to the geologic make-up of the earth below the Brier study/interest area, as depicted in Figures B-8 and B-9. An aquifer underlies the entire area, and essentially occurs in the unconsolidated deposits of Vashon glaciation till and advance stratified drift. It is thought to be lens-shaped and flow in a southeasterly direction. It is likely that springs from the aquifer feed Swamp Creek.

Vashon till, which is a gray concrete-like mixture from 20 to 150 feet thick, is essentially impervious to downward percolation of water. Therefore, it is not an important ground water recharge unit. However, it does have sandy and gravely streaks, as well as a disintegrated surface zone in places. Such areas can yield small quantities of ground water.

A much more important ground water source is the advance stratified drift, or sometimes referred to as the Esperance Sand member. This geologic unit underlies the Vashon till in most of the planning area, but is exposed at the surface in the erosional areas along Swamp and Scriber Creeks. It has a depth of up to 400 or 500 feet and generally dips south-southeast. This unit includes a thick zone of slack-water deposits of clayey materials south of Alderwood Manor to the Sammamish River. As a result, well development is difficult in this area. However, coarse materials yield moderate to large amounts of ground water. The advance stratified drift, where exposed at the surface, is also a very important aquifer recharge unit.

Table B-2 summarizes the well information in the Brier study/interest area on file with the Department of Ecology. Figure B-9 shows the location of these wells.

FIGURE B7- DRAINAGE BASINS

FIGURE B9 - HYDROLOGY

C. PLANTS AND ANIMALS

1. Vegetation

The Puget Sound region is part of the coastal Coniferous Forest Zone, also referred to as the Cedar-Hemlock Zone. This vegetation zone includes two major plant associations: the Fir–Cedar–Hemlock and the Alder–Maple–Cottonwood. The stands of trees in the Brier study/interest area are largely second-growth forests; the pre-settlement forests were logged near the turn of the century.

The trees that remain today occur in very important areas. Most of the severe slopes are tree-covered, as are the banks of Swamp Creek. The trees, together with their vegetative understory, act to stabilize the soil and reduce erosion. Several isolated belts or small groupings of trees occur throughout the planning area. These trees add continuity to the planning area, as well as block undesirable views and noise of transportation corridors, delineate neighborhoods and land uses, and add to the rural character of Brier.

Much of the planning area has been cleared of trees for urban development (see Figure B-10). In these areas, some native trees remain, along with ornamental plant materials of residential landscaping. Cleared but vacant parcels are comprised of grasses, forbs, shrubs, and weeds. Swampy areas, particularly along Scriber Creek, have typical riparian plant materials such as reeds, cattails, alder and grasses.

2. Fish

Swamp Creek and its tributary, Scriber Creek, are part of the lower Sammamish River drainage. They are considered very important salmon-producing tributaries. The stream widths vary from 2 to 6 yards with some channel splitting. The quality of gravel in these two creeks is excellent for spawning.

Coho and chinook salmon are the principal species utilizing Swamp Creek. Fair numbers of sockeye also spawn in this creek. Coho fingerlings rear throughout the accessible stream length. Chinook fry normally rear up to 90 days in the creek before ascending into Lake Washington to start their seaward migrations. Coho fingerlings also drop downstream and rear in the Sammamish River and Lake Washington.

Swamp and Scriber Creeks also have fair number of cutthroat and steelhead trout, both anadromous and resident. A count by the Department of Game in 1986 showed 43 of these fish with 27 spawning nests. The Department's goal is to achieve 100-110 steelhead trout and a total of 200 wild fish (Fifer. 1986).

A major limiting factor for fish numbers and spawning is the low summer flows which restrict the rearing capacities for coho juveniles and occasionally preclude chinook salmon from ascending these streams until mid-October. Also limiting utilization by fish to flood damage and siltation problems from construction and development. This activity has altered some sections of both Swamp and Scriber Creeks, making these sections unsuitable for spawning and rearing. Poaching is a very serious problem also.

The presence of water (lakes, creeks, ponds), swampy areas, open meadows, and forested areas offers much habitat for wildlife. Principally, the Brier study/interest area is a haven for nongame species such as songbirds, hawks, eagles, pigeons, crows, quail and pheasant and small and medium size mammals, such as opossum, coyote, squirrels, fox, raccoon, and waterfowl, such as ducks, blue heron and Canadian geese. Although the area is largely rural residential, there is too much human activity to allow for a resident population of deer. However, deer may pass through the area, taking advantage of the forested corridor north to south along Swamp Creek.

FIGURE B10 - VEGETATION

APPENDIX B

1989 LAND USE INVENTORY

LAND USE INVENTORY

The following land use inventory information is taken from the Draft Comprehensive Plan prepared by R.W. Thorpe & Associates, November 1986. It includes a large study/interest area that pertained to the City at that time. It is included in this Appendix for background information purposes.

The land use inventory of the community shows the developed land within the existing Brier city limits, that in the Study Area and that in the Interest Area.

A considerable amount of land in the entire study areas remains vacant, approximately 40 percent. The vast majority of the vacant land is designated single-family/residential. The following table presents a summary of existing land use inventory showing the amount of land in each major category and the proportion of that acreage to the total land area, as well as vacant or under utilized properties.

TABLE 1
Total Land (Acres)
Study / Interest Area

Year	Total Acres	Residential Land	Employment Land	Vacant Land		
				Brier[1]	Study / Interest Area Excluding Brier[2]	Balance
1970	5,615	768	237	580	2,473	1,557
1980	5,615	1,252	246	470	2,010	1,637
1990	5,615	1,576	392	382	1,628	1,637
2000	5,615	2,199	624	219	936	1,637

1 These figures do not include land that is undevelopable, such as streets and public utility rights-of-way.

2 These figures include land that is physically developable according to standards and policies currently applicable by local governments.

As the table shows, the land use within the existing city boundaries, the study area and the interest area are largely single-family (S/F), detached ownership or potential S/F use. It is almost entirely one half acre (20,000 SF) and one third acre (12,000 SF) sites. Major portions of the remaining undeveloped land is in the sensitive areas designations, indicating that a combination of topography, soils, geology, hydrology, vegetation another factors provide minor constraints or major impediments to development.

The inventory of existing land use shows parks, schools, the library, city hall, the fire station and other community facilities. These represent a relatively small portion of the city's land area. In addition, one small commercial area is contained within the existing city limits and three sites within the study area.