

# Appendix F: Graham Community Plan

The Graham Community Plan’s narrative text and policies are in addition to the Countywide Comprehensive Plan narrative text and policies and are only applicable within the Graham Community Plan Boundary.

- “Current” or “Existing” conditions are in reference to conditions at time of adoption (Adopted Ord. 2006-52s, Effective 3/1/2007).
- “Proposed” or “Desired” conditions are those which required Council action and may have also been amended over time through a Comprehensive Plan Amendment (amendments are reflected in this document).

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# Chapter 1: Introduction

## GREATER GRAHAM COMMUNITY

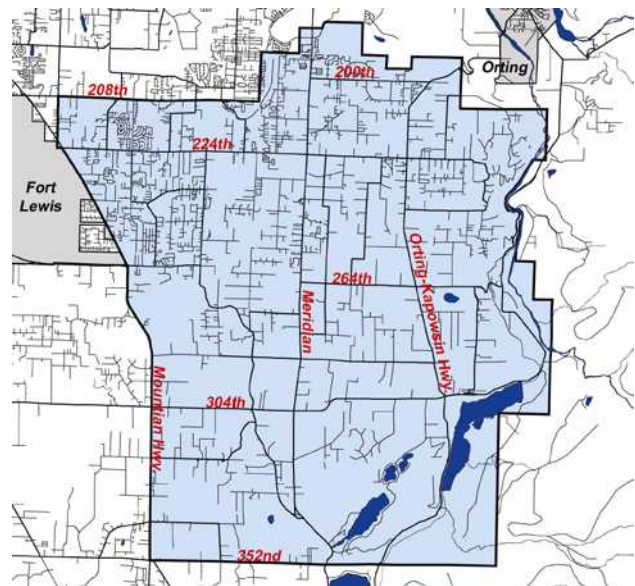
The greater Graham area in Pierce County has experienced a significant amount of growth during the past several decades. Some of this growth has been at the expense of the areas' rural atmosphere. Pierce County and representatives from the community have identified a community vision, discussed issues and created policies that will assure sensible and appropriate levels of development within the plan area over the next 20 years.



The result of this work is the creation of a community plan that provides a framework for consistent land use standards in both the urban areas and in the outlying rural and natural resource lands. Higher density and intensity development is directed into urban areas, where it can be supported by urban level services and facilities. This also allows rural and natural resource areas to retain the low density, agricultural, and forested character that the community values.

## GENERAL DESCRIPTION OF THE PLAN AREA

The Graham Community Plan area is located in south central Pierce County at the fringe of the County's urban growth area limits. The plan area is bounded by the communities of Spanaway, Frederickson, and South Hill to the north. The northernmost limits range from 208th St. E. at the western edge up almost to 176th St. E. at SR 161 (Meridian Avenue). SR 7 (Mountain Highway) is located along the western boundary of the plan area and 352nd St. E. represents the southern boundary. The plan area extends as far east as the Puyallup River Valley. The intersection of 264th St. E. and SR 161 is roughly the geographic center of the plan area.



*Graham Community Plan area*

The plan area is approximately 76.5 square miles in size and encompasses almost 49,000 acres of urban, rural and natural resource lands. Many small, distinct communities are located within the plan area including Graham, Elk Plain, Kapowsin, Thrift, and Rocky Ridge, and some plan area residents associate themselves with other neighboring communities such as Eatonville and Orting. Major north/south transportation routes within and adjacent to the plan area include Mountain Highway, SR 161,

which bisects the center of the plan area, Webster Road and the Orting-Kapowsin Highway. The main east/west access routes through the plan area are 224th, 304th, and 352nd Streets E.

While a small portion of the northern plan area is located within the County's Urban Growth Area boundaries, the majority of the plan area is very rural in character with rolling pasturelands, timberlands and low density rural residential housing. There are many unique environmental features within the plan area including a myriad of lakes and a complex system of rivers and creeks, many of which are salmonid bearing. These systems also support a variety of wildlife species. Morse Nature Preserve, located at the headwaters of Muck Creek, provides an excellent opportunity within the plan area for bird watching and educational events.



*Morse Wildlife Preserve*

## GROWTH TRENDS, POPULATION AND DEMOGRAPHICS

### GROWTH TRENDS

During the years between 1990 and 2000, the Graham plan area had a higher percentage of population growth than the surrounding communities and Pierce County as a whole. The following is an example of the comparative growth (expressed in percent) from 1990 to 2000 between the plan area and other areas:

Graham - 58%

South Hill - 44%

Frederickson - 52%

Pierce County (incorporated and unincorporated) - 20%

### CURRENT POPULATION

The year 2000 population within the plan area was calculated at 32,513 people. Of the total plan area population, it is estimated that 2,837 of those people reside inside the Comprehensive Urban Growth Area (CUGA) boundary while the remaining 29,676 residents live in either designated rural or natural resource areas.

### TWENTY-YEAR POPULATION FORECAST

Population forecasting is an inexact science. A number of different assumptions are put into population models in an attempt to predict what the population will look like in the future. Another layer of complexity is added to this task when considering the implementation of social policies, such as the Growth Management Act, and determining how they may affect growth. To acknowledge these differences, the projected population growth between the years 2002 and 2022 for the Graham plan area is estimated between 6,700 and 13,000 people.

The lower population projection is a product of the Pierce County Population Allocation process. Through this process, substantial emphasis is placed on the urban growth policies adopted in cities' and towns' comprehensive plans that have the effect of redirecting growth back within city limits. The accuracy of this low range relies on the success of implementing those policies. The higher estimate results from the same modeling process; however, the results were not further refined to incorporate cities' and towns' policies. In general, the exclusion of these policies from the forecasting process generates higher growth estimates in urban and rural areas of unincorporated Pierce County.

## DEMOGRAPHICS

Demographics for the plan area were compiled from information contained within the year 2000 U.S Census survey. The following nine census tracts encompass the plan area and were used to derive the demographic information; 731.07, 731.09, 731.13, 731.14, 731.15, 731.16, 731.17, 731.18, 731.19.

The age of the population within the plan area is generally younger than Pierce County's average. Approximately 62 percent of the population is between 18 and 65 years of age, while 31.4 percent of the population is under the age of 18. The County as a whole has roughly 27 percent of its population under the age of 18.

The income characteristics indicate the households in the plan area have a higher income level than Pierce County as a whole. The median household income for Pierce County is approximately \$45,200 and 64 percent of the households in the plan area have an income of \$45,000 or higher. Roughly 10 percent of the households within the plan area have an income less than \$20,000 and approximately 11.6 percent have an income level of \$100,000 or higher.

## HISTORY OF THE PLAN AREA

### EARLY HISTORY THROUGH THE 1900S

#### PRE-1850S



*John McCloud*



*John McCloud's Daughter – Catherine Mounts*

Before the 1850s, the Graham and Kapowsin areas were largely forested and the Elk Plain area was a vast prairie. Native Americans inhabited these areas for thousands of years and maintained a fire regime to help foster the oak woodland and prairie areas. The community planning area was part of the traditional lands of the Nisqually and Puyallup Indian Tribes. The Puyallup villages were located near the northeastern portion of the community planning area. The Nisqually people considered the area a major part of



their “bread-basket” as the area was teeming with fish and wildlife and the prairies provided nuts, roots and other edible plants. The variety of resources was also used for shelter, clothing and other household provisions. The Nisqually people called Kapowsin Lake “Tuh-powt-se,” Muck Creek “Y’Il-whaltz,” and Orting Prairie “Tu-wa-quotes.”

Also prior to 1850, Elk Plain was utilized by the Hudson’s Bay Company as a grazing area and its employees lived in the Muck Creek Area. In 1850, the Donation Land Claim Act was passed by U.S. Congress. The only donation land claim within the community plan area was filed by John McCloud for 320 acres near Muck Creek. Prior to this, Native Americans used the site as a summer campground. John McCloud married a local Native American woman and had a daughter. Some of their descendents still live in the area.

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## 1850s – 1900

In 1862, The Homestead Act was passed by U.S. Congress bringing more settlement into the area. The area was still largely forested with huge trees and it took months to clear an acre of land. Some of the first settlements included the Peter Leber Settlement, the first post office in 1884, and the Barling Place, which raised and sheared sheep for wool. The cultivation of hops as a cash crop was widespread in the area until 1890 when hops lice devastated hops production.

During this time many school districts, often one-room schools, were formed and churches were constructed to serve new parishes. Newly formed school districts included: Muck Creek/Oak Knoll School District (S.D.) No. 5 in 1859; Spanaway S.D. No. 6 in 1860; Spanaway S.D. No. 25 in 1882; Kirby S.D. No. 49 in 1888; Thrift S.D. No. 41 in 1891; Rocky Ridge S.D. No. 59 in 1891; and Elk Plain S.D. No. 80 in 1892. In 1898, Bethany Lutheran Church was constructed.

Railroads played an especially important role in shaping the character and pattern of development in the plan area. Railroads were brought through the hinterlands of Pierce County to reach the areas where natural resources such as timber, coal, and mineral resources were extracted. They also provided transportation for livestock and farm products and milled wood products. Tacoma Eastern Railroad was extended in 1900 to Frederickson, Graham, Thrift and Tanwax Junction. In 1901, the railroad reached Kapowsin and by 1904 the line was extended to Elbe and Ashford.

From an early period, Mountain Highway (SR 7) and Meridian (SR 161) were the two main north-south thoroughfares that connected the rural communities located within the plan area to the bigger cities and towns. In the 1890s, Mountain Highway was a country road, extending southward through prairie and into a forested area at Benston’s Hill after crossing Muck Creek. In the early 1900s, daily horse-drawn stage coaches traveling on the road from Tacoma to Ashford passed by Elk Plain. Webster Road and many other roads in the area were also constructed during the 1880s and 1890s.

## THE EARLY 1900S THROUGH THE EARLY 1950S

### 1900 – 1920s

During the early 1900s, many logging camps were established in the eastern portion of the plan area at Kapowsin and along the Tacoma Eastern Railroad line and logging mills sprang up along the shores of Lake Kapowsin. By mid-1906, five shingle or saw mills were in full operation at Lake Kapowsin, 23 mills were in full operation along the Tacoma Eastern railroad line, and several additional mills were under construction.

The Electron Hydropower Plant was also constructed and went into service in 1904. Electron was the first major hydroelectric project in Pierce County and the largest in the state at the time.



*Harding Mill – Early 1900s*

Mountain Highway became one of the first concrete paved highways in the state largely due to the extraordinary efforts of Torger Peterson, an early settler of the Ohop Valley. By the fall of 1926, 49 miles of highway from Tacoma to the Mt. Rainier park entrance was paved with concrete.



*Moebius Farm circa 1920s, early 1930s*

Farming continued to flourish in the plan area during the early 20th century. Most farmers tended chickens, cows, and vegetable gardens and logged timber for their livelihood. Granges were organized in the 1920s to promote farmers' interests in taxation, water and utility provisions, pricing, distribution, and transportation issues. They also provided for agricultural research, education, and as community gathering places for social and family activities and events. During this time period the following granges were established.

- Loveland Grange No. 782, May 23, 1921, later renamed Elk Plain Grange No. 782.
- Thrift Grange No. 804, 1921, rechartered to Kapowsin Grange No. 804.
- Benston Grange No. 892, November 5, 1928, later consolidated with the Elk Plain Grange.
- Graham Grange, 1931, demolished in 2004.
- Crocker Grange, May 29, 1942, later merged with the McMillan Grange in 2001.

### 1930s – 1950s

By the 1930s through 1950s timber mills were starting to decline due to dwindling timber resources. Some mills, such as the one in Harding, that were burned in fire accidents were not



replaced. As logging activity decreased, so did employment in the area. Former loggers and sawmill workers had to find work elsewhere. During this time many plan area residents began commuting to work in Tacoma, DuPont, Fredrickson, and other urban centers.

Much of the existing road network within the plan area was constructed by this time period and tourism on Mountain Highway to Mt Rainier became more active. Some of the earlier roads included the Orting-Southern Road which later became Orting-Kapowsin Highway, L. C. Tallman Road (158th Ave. E.), Mathias-Webster Road, Eustis Hunt Road East, Muck-Kapowsin Road (224th St. E.), Thrift Extension Road, McDonald Road (264th St. E.), and the Graham Farm-to-Market Road (Meridian [SR 161]).

During 1945 planning for the area's first park (Frontier Park) began. The St. Paul and Tacoma Lumber Company was persuaded to donate 20 acres of land just north of Graham, with the proviso that it be used as a park. The first picnic was held there that same spring. The local residents donated labor and funds to make improvements to the land. Soon the field was prepared for baseball and other activities. By 1952, the Rainier Riding Club was given permission to use some of the park's space to create a quarter mile track and other improvements.

## THE 1950S THROUGH THE 1970S

During post-World War II, farming continued within the plan area including berries, cherries, bulbs such as daffodils and tulips, poultry farms and dairy farms. Logging and timber mill production dwindled but plywood milling was introduced and became established in the plan area. During the 1960s, residential growth started expanding.

In May 1963, a Board of Directors for Frontier Park was created and incorporated under the new name. In 1967, the Pierce County Fair Board was invited to hold its annual fair at the park and the board accepted. The fair moved from Sumner to Frontier Park in August 1968. The Pierce County Fair has remained at the park since that time. It remains one of the sources of community pride.

## THE 1970S THROUGH PRESENT

During the 1970s through the early 1990s, the plan area experienced a building boom in residential housing, including mobile home placement. Zoning within the plan area was General, which allowed for virtually all uses. Crime also increased during this time period and police protection became an important issue.

In 1994, the County adopted the Pierce County Comprehensive Plan. This plan designated most of the plan area as rural with low residential densities permitted. Commercial areas within the plan area were contained within designated Rural Activity Centers (e.g., 224th St. E. and Meridian) and Rural Neighborhood Centers. Further commercial sprawl down Mountain Highway and Meridian was stopped by defined centers and rural zoning.

## INDIVIDUAL COMMUNITY HISTORIES

### BENSTON

Benston was originally called Huntersville. The name was changed in 1892 to honor local citizen Adam Benston, an employee of the Hudson's Bay Company, who later served as a mail carrier. The Benston School District split from the Muck District in 1878 and operated until 1930 when it merged with the Kapowsin District. Benston was an agricultural community raising crops such as wheat, oats, and barley, and livestock for beef and dairy products.

### ELECTRON

Electron was the first major hydroelectric project in Pierce County and the largest in the state at the time it was constructed. When the construction of the facility was at its peak, the project employed between 1,500 and 2,000 workers who were stationed in "camps" at the various project sites. The Electron [Hydroelectric] Plant went into service in 1904. The Electron Plant became part of a power distribution system that included Snoqualmie Falls (1898), White River (1911), the Georgetown Steam Plant (1906), Nooksack Falls (1906), the York Street Stream Plant in Bellingham, gas properties in Bellingham and coal mines in Renton. A 300 mile long 55,000 volt transmission line connected these systems and provided a regional power supply system in the Puget Sound area.

The importance of the Electron Plant has been diminished by the development of other power sources in the area over the past decades. However, the Electron dam and powerhouse were still operational in 2004 and celebrated its 100th anniversary with nearly 60 employees and retirees.

### ELK PLAIN

Elk Plain got its name from the herds of elk that grazed the prairie area. Native Americans who inhabited the area kept the land open for grazing through regular burning of the area. By the mid-1840s, the Hudson's Bay Company used Elk Plain as a grazing area for their estimated 6,000 sheep and 3,500 head of cattle. The former Puget Sound Agricultural Company land was not open to settlers until Washington Territory and Pierce County could purchase the land for \$750,000 in 1867 after a long court battle over the sale price. Early industry included a sawmill that used to be located at about 240th St. E. Some of the pioneer families included Beattie, Ockfen, Wright, Moe, Theil, Rohr, Ehlers, Fisher, Kinsman, and Fuchs. Many of their descendents still live in the area.

The Elk Plain School District was created in 1892 on land donated by S. E. "Amos" Moe. A two-room schoolhouse was built on the site where Elk Plain Elementary is located today. In 1901, the Elk Plain Café was built as a gas station and roadside café. Within a couple of years, cabins were added in back for weary tourists traveling on the road to the mountain.

Loveland Grange No. 782 was formed in 1921. This grange was started by local residents who wanted to form an organization for mutual support in seeking fairer compensation for their properties when the local area was condemned for the construction of Camp Lewis, which

began in 1917. The grange meetings also led to the formation of the Loveland Mutual Light Company. The company's interests were sold in 1971 to what is now Tacoma Public Utilities. Elk Plain School District No. 80 was consolidated into Bethel School District No. 403 in 1949.

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## GRAHAM

Around 1900, Smith Graham, foreman for the Cascade Timber Company, was among the first who started harvesting timber in the area. In the early 1900s, the Tacoma Eastern Railroad (later the Milwaukee Railroad) built tracks from Tacoma through Frederickson, Harding, Graham, Thrift, Tanwax Junction, Kapowsin, and Elbe. The railroad and lumber companies established mills and logging camps in the Graham area. Graham was a necessary stop for the trains transporting lumber to mills located in Kapowsin.

Between 1905 and the 1960s a variety of businesses operated in the community such as a shingle mill, barbershop, blacksmith shop, feed and supplies, auto and tractor repair shop, tavern, restaurant, cold storage lockers, and a meat market.

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## HARDING

The settlement of Harding was a railroad stop and mill site located along a spur line adjacent to the Tacoma Eastern Railroad right-of-way. It was located one mile west of present-day Graham and was named after Henry and Charles Harding, the first mill operators at that place. With a mill operating in the community and active logging operations in the vicinity, Harding was a small but thriving community from the 1900s to 1920s, complete with a store, boarding house, dance hall, cookhouse, and several smaller homes. In its heyday, an interesting addition was the Japanese village, which consisted of neatly kept homes admired by the community.

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## KAPOWSIN

The community settled by Euro-Americans in 1888 got their start through the booming logging industry like many other small communities in the southern portion of the County. The name of the community is likely to have been derived from the Native American name Kapousen which means "shallow place" and was also the name of the leader of the local Native American band that lived along the lakeshore.

From 1888 to 1929 the rise and growth of Kapowsin was tied inextricably to logging, milling, and railroads.

The Kapowsin Post Office opened in 1890. The Tacoma Eastern Railroad reached the area from Tacoma in 1901 and was joined later by the Northern Pacific Railroad to transport timber resources harvested from the area. The first sawmill in Kapowsin was built by the Kapowsin Lumber Company in 1901. By mid-1906, five mills were in full operation on the lake - two shingle mills and three lumber mills.



*Town of Kapowsin – early 1900s*

By 1915, Kapowsin was a thriving community with an estimated population of 750. It had a vibrant business section that served the community that included a restaurant, café, theater, three general stores, two churches, telephone and telegraph office, bakery, bank, laundry, hotels, and doctor's office. Electricity was provided to the community as early as 1905 by the Electron Power Plant. Samuel Fix installed a water system from 1913 to 1914. A very small four-room school was built in late 1904. Later, a much bigger school building was built which housed students from grade one through twelve with an average student population of 280 students. Its first high school class graduated in 1914. A major gymnasium, which included a swimming pool, was built in 1922. The gymnasium was considered the finest in the County at the time.

By 1928, logging in Kapowsin was in sharp decline because much of the surrounding timber land had been cleared. Workers in the logging industry and those who served their needs started to move on. Most of the mills closed down except one. The demise of the community accelerated in 1928 when the City of Tacoma, which coveted Kapowsin Lake for a municipal water supply, announced plans to acquire considerable land around the shores of the lake. The city announced its plans to purchase the mills, stores, homes, churches, and any other standing buildings and level them. However, the City soon discovered a major artesian source of water in South Tacoma and no longer needed the water from the lake, which required transporting water 25 miles to the City.

By 1930, Kapowsin reverted back to being a rural farming community. Kapowsin School District continued to provide a sense of civic identity. Eventually, Kapowsin School District was consolidated with Bethel School District in 1949. The influx of new residents seeking the quiet solitude of Kapowsin Lake has been gradual. Kapowsin is now a community of a variety of residents engaged in dairy and fruit farming, logging, and recreational fishing, in addition to retirees.

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#### KIRBY

Kirby was a small sawmill camp on the Tacoma Eastern Railroad, 14 miles southeast of Tacoma. The railroad reached there in about 1900. There was no village at Kirby. It was a train stop from which lumber was hauled to Tacoma. The North Star Lumber Company built a mill in about 1908 and in 1912 the mill was bought by the Kirby Lumber Company. The mill burned in 1913. At the time, there were 55 men employed at the mill. Kirby was also the site of a small schoolhouse.

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#### LEBER

Leber, a small community located about 340th St. E. and Mountain Highway, included the old Weyerhaeuser Elementary School, a fire station, and a small grocery and gas station. This is one of the oldest communities in Pierce County. The Leber Post Office was established in 1884. It was named after an early settler, Peter L. Leber, who served as the first postmaster. Mr. Leber's small log cabin served as the original post office. His home site still contains several of the rough hewn cedar out-buildings he constructed. A train route was extended from Tanwax Junction through Leber and on to the Silver Lake area lumber mills in the early 1900s.

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## ROCKY RIDGE

Rocky Ridge is an area from approximately 260th St. E. over the North Fork of Muck Creek to the ridge of Muck Creek hill and between 8th Ave. E. (Pole Line Road) and Webster Road. The current Rocky Ridge Elementary School is located on part of the William Benston Sr. family homestead. The original Rocky Ridge School District used a one room schoolhouse from 1910 to 1949 when it was consolidated into the Bethel School District. The history of settlement in the area extends back to the days of Fort Nisqually.

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## TANWAX JUNCTION

Tanwax Junction was a creation of the railroad and logging industries which flourished in the area from 1901 to 1928. It did not begin as a residential community but as a railroad switching station serving the Tacoma Eastern Railroad, as well as the spur lines of the Tanwax and Western Railway and the Tide Water Lumber Company. It was located on the flat plain above the bustling logging community of Kapowsin, just off the now Orting-Kapowsin Highway. The Junction may also have met the immediate needs of the logging industry by serving as a small collector point for railroad cars hauling logs to the Tacoma logging mills.

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## THRIFT

The first homesteaders of this area arrived in the 1880s. The settlement dwindled in the late 1890s but increased in size after 1900 with the arrival of the Tacoma Eastern Railroad. The Thrift family arrived in 1903. Earlier the railroad stop located in the area was called Summit due to the steep grade the logging trains had to ascend. The name was changed to Thrift to avoid confusion with another community called Summit located near Puyallup. Thrift was an early logging site and hop growing area near the turn of the century.

The first store in Thrift was called Edmans Corner. It was located on the corner of Orting-Kapowsin Road and Muck-Kapowsin Highway (224th St. E.). After being sold a couple of times, it was renamed the Thrift General Store. The first two-room Thrift School was built across Muck-Kapowsin Highway from the store. Thrift School District No. 41 organized in 1891 was consolidated into Kapowsin School District No. 347 in 1949.

## PLANNING HISTORY

Pierce County has been conducting comprehensive planning and regulating land use for over four decades. The following is a brief description of the major planning efforts initiated within Pierce County during this time period.

### COUNTY PLANNING

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#### 1962 PIERCE COUNTY COMPREHENSIVE PLAN AND ZONING

The first Pierce County Comprehensive Land Use Plan and the Pierce County Zoning Code were adopted in 1962. Zoning districts were established that dictated the appropriate location for

commercial business and residential homes. However, the 1962 plan did not offer much protection from incompatible uses nor recognize the unique individuality of communities. Under this plan, most of the plan area was zoned General, which allowed a variety of use types and higher levels of residential density than what is currently allowed in the rural and resource zones.

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## 1994 PIERCE COUNTY COMPREHENSIVE PLAN

The Growth Management Act (GMA) was passed by the Washington State Legislature in 1990. This legislation required Pierce County to engage in countywide planning with the cities and towns located within Pierce County and to update its existing comprehensive plan and development regulations in conformance with the requirements outlined in the new law.

In 1991, Interim Growth Management Policies were adopted as a transition between the 1962 Comprehensive Plan and the new planning required under the GMA. The Pierce County County-Wide Planning Policies were adopted in 1992, which provided the framework and process by which Pierce County and the cities and towns within the County established urban growth areas, provided infrastructure and services, and preserved agricultural and natural resource lands.

In 1994, per the requirements of the GMA, Pierce County adopted a new Comprehensive Plan, which replaced the 1962 Pierce County Comprehensive Plan in its entirety. This plan established population projections, urban growth areas, rural areas and natural resource lands. The new Countywide plan became effective January 1995, with its implementing development regulations becoming effective July 1995. The majority of the plan area was redesignated to rural as a result of the 1994 Comprehensive Plan.

## COMMUNITY PLANNING

Although the GMA does not require comprehensive plans to provide for community plans, Pierce County Ordinance No. 90-47s directed County officials to prepare a community plans element of the Comprehensive Plan. The Comprehensive Plan community plans element identifies which communities will receive a community plan; provides the framework for community planning; and establishes the flexibility for communities to refine comprehensive plan land use designations and associated densities and apply design standards to achieve a local vision, while remaining consistent with the Comprehensive Plan and the GMA.

Since 1994, several community plans have been adopted throughout unincorporated Pierce County including the Upper Nisqually Valley, Gig Harbor Peninsula, Parkland-Spanaway-Midland (PSM), South Hill, Frederickson and Mid-County. The majority of unincorporated County residents now live in community plan areas.



## SCOPE OF THE COMMUNITY PLAN

### LEGISLATIVE AUTHORITY TO DEVELOP THE PLAN

The 1994 Pierce County Comprehensive Plan Community Plans Element identifies Graham as an area to receive a community plan. In 2001, the County Council authorized the initiation of a community plan for the greater Graham area.

In 2002, the County Council adopted Resolution No. 2002-65s, which required the community planning boards and the Planning and Land Services Department to use the adopted Upper Nisqually Valley, Gig Harbor Peninsula, and PSM community plans, and implementing regulations for these plans, as a template for developing future community plans and regulations. Specifically, this Resolution encourages communities to use the existing menu of land use designations and classifications, employ the established use types and levels of use, and recommend changes to administrative processes or development regulations that apply at a countywide scale (e.g., nonconforming use provisions and critical area and stormwater regulations).

### PURPOSE AND USE OF THE COMMUNITY PLAN

The Graham Community Plan gives the residents, businesses, property owners, and the County a clear and more detailed sense of how the community should develop in the future and what standards should be utilized to control the character of the community. The purpose of the plan is to:

- Develop a long-range vision for the community;
- Evaluate the vision for the community in light of the Pierce County Comprehensive Plan and make refinements as necessary to ensure consistency between the overall countywide plan and the community plan; and
- Identify actions necessary to implement the community plan, including: adopting or revising land use regulations; identifying priorities for use of public funds to develop physical improvements, such as sidewalks, street landscaping, street lights, water-related improvements, and park development; social programs; economic programs, etc.

## COMPONENTS OF THE COMMUNITY PLAN

### DEVELOPMENT OF THE VISION STATEMENT

Visioning is a process completed through a series of public meetings or workshops structured to allow the community to articulate hopes for the future. A vision is a statement that provides direction and represents a reflection of who and what the community is and wants to become. Statements, thoughts, and ideas brought forth in the visioning process become the basis for the overall vision statement and provide a context for the individual goals outlined in each plan element.

## PLAN ELEMENTS

Each community plan contains elements that address land use, community character and design, economic development, natural environment and facilities and services. These elements contain a description of existing conditions (background information), description of desired conditions, policies and implementing actions.

## POLICIES (GOALS, OBJECTIVES, PRINCIPLES AND STANDARDS)

Policies can be categorized into a hierarchy of goals, objectives, principles and standards and collectively serve to implement the vision. Goals describe a desirable future for the community and identify specifics on how the values and hopes set forth in the vision statement will be accomplished. Goals provide the framework for developing the objectives, principles and standards and implementing actions within each element. Objectives are statements which specifically define goal actions. Principles set a particular course of action to accomplish objectives. Standards are specific benchmarks or targets, either quantitative or qualitative, for achieving objectives and principles. When applying the policy statements, each is afforded equal weight and consideration.

## IMPLEMENTING ACTIONS

Implementing actions provide the mechanism to accomplish the vision, goals, objectives, principles and standards. Implementing actions are phrased as directives to refine or change policy documents, regulations, capital facility plans, or programs; implement studies or other data collection efforts; or coordinate agencies and community groups to work towards accomplishing other non-regulatory measures.

## CONSISTENCY WITH THE PIERCE COUNTY COMPREHENSIVE PLAN

The Growth Management Act requires consistency between plans and implementing development regulations. Furthermore, the Pierce County Comprehensive Plan Community Plans Element contains specific policies that require consistency between the Comprehensive Plan and community plans. The goals, objectives, principles, and standards in the Graham Community Plan are consistent with the provisions in the Pierce County Comprehensive Plan.

## PUBLIC INVOLVEMENT

Public involvement is an essential component in the development of an effective community plan. Development of the plan incorporated a variety of public involvement strategies including the formation of a Community Planning Board (CPB), public workshop and open house, and community surveys and assessments. These efforts help ensure that the plan represents the general will and values of the community.



## COMMUNITY PLANNING BOARD

The development of the Graham Community Plan could not have been accomplished without the Graham Community Planning Board (CPB). Appointed in the spring of 2002, this board consisted of fifteen members representing a variety of interests and geographic locations throughout the community plan area.

This group was charged with the following responsibilities: 1) serving as a sounding board for the community; 2) developing a community plan and implementing development regulations that address community concerns while remaining consistent with the Comprehensive Plan; and 3) forwarding a recommended plan to the Pierce County Planning Commission and Pierce County Council.

The CPB conducted bi-monthly public meetings starting in March 2002 and continuing through December 2005. A total of 83 CPB meetings were held during this time period and many members of the community attended, enriching the planning process. In addition, a history subcommittee of the CPB conducted 14 separate meetings to work on development of the historic resources section of the plan.

## OPEN HOUSES

The CPB worked on developing an overall vision for the community and goal statements for each element throughout the spring and summer of 2002. In September 2002, the CPB held its first open house at Graham Elementary School. This open house was used to provide information to the general public on the community planning process and receive public opinion on the draft vision and goal statements. Many members of the community attended and offered feedback and some suggested changes to the draft documents.

A second open house was held at Kapowsin Elementary School on December 12, 2005 to present the CPB's final recommendations. This open house gave the public an opportunity to review and comment on the draft plan and proposed implementing regulations prior to its transmittal to the Pierce County Planning Commission and County Council. The CPB used the open house forum to solicit important community feedback regarding their proposed recommendations.

## WDOT HIGHWAY 161 ROUTE DESIGN PLANNING (RDP) PROCESS

The Washington State Department of Transportation (WDOT) prepares Route Development Plans (RDPs) for state routes and highways within Washington. These plans typically address issues such as highway mobility needs (tied to existing traffic volumes and forecasts of future demands), highway safety, transit services, nonmotorized transportation needs, access, and environmental constraints.

WDOT commenced an RDP on SR 161 from 234th St. E. south to its intersection with SR 7, in the spring of 2003. The WDOT conducted five stakeholder group meetings for the RDP planning process. Both County staff and community planning board members served on the

stakeholders group. Three open houses were held (April, June and September 2003) within the community to solicit input on highway needs including improvements to the segment traversing Graham Hill. Approximately 100 residents participated in these open houses. This is the first time that WDOT has developed an RDP at the same time a local community plan is being developed.

## SURVEYS AND ASSESSMENTS

### GRAHAM COMMUNITY ASSESSMENT - 1999

The Tacoma-Pierce County Health Department (TPCHD) conducted a community assessment within the Graham area in 1999. The purpose of the assessment is to help communities identify and understand their public health issues and then implement actions which will make the community a healthier place to live and work. This assessment was one of the catalysts to begin a community plan for the greater Graham area and provides valuable insight into community values and issues.

The assessment contains a series of recommendations centered on the following major themes: controlling growth and development, sharing data and information, improving the natural environment, supporting schools and school related activities, reducing crime and increasing safety, and improving County relations. Other miscellaneous recommendations relevant to the community planning process include: developing a community center(s), creating alternative non-sports related activities in the community such as art and theatre, and constructing road improvements to increase safety.

### GRAHAM COMMUNITY PLAN SURVEY - 2002

In late December 2001/early January 2002 the Pierce County Planning and Land Services Department mailed surveys to 3,337 households throughout the community plan area. An additional 150 surveys were conducted by telephone. A total of 3,487 surveys were distributed by either mail or telephone.

The intent of the survey was to solicit input on a variety of issues including perceived quality of life; adequacy of facilities and services within the plan area; quality of the natural environment; and location and intensity of residential, commercial, and industrial uses. The survey was divided into three categories: existing conditions in the community, policy choices for the community, and household characteristics. Respondents were provided space at the end of the survey to add their own comments.

A total of 257 mailed surveys were completed and returned. This equates to a return rate of 7.7%. When added together with the additional 150 telephone surveys, a total of 407 surveys were completed. Statistically, this represents a sufficient number of surveys returned to obtain an accurate representation of household opinion to within approximately +/-5 percent.

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## WATERSHED ASSESSMENTS - 2001, 2002 AND 2003

In December 2001 the Washington Department of Ecology (WDOE) published a document titled "Assessment of Surface Water and Groundwater Interchange within the Muck Creek Watershed Pierce County." This assessment focused on two creek systems located within the plan area including South Creek and Muck Creek. The study was initiated because of intermittent stream conditions negatively affecting salmonids using these systems. The purpose of the assessment was to evaluate the potential cause(s) of intermittent flow conditions within the watershed, provide a general overview of the hydrologic setting which gives rise to problematic conditions, and offer recommendations to help guide area residents and water use managers as they work to enhance or restore instream habitat.

The TPCHD has initiated a watershed plan, under State legislation ESHB 2514, within the Clover/Chambers Creek watershed (WRIA 12). The Nisqually Indian Tribe is the lead for developing the same type of watershed plan for Nisqually River Watershed (WRIA 11), which is also currently underway. These planning efforts will help determine groundwater availability and allocation of groundwater within the watershed. The plans will also analyze water quality and habitat conditions, which are related to water supply issues. Both of these plans provide an assessment of existing environmental conditions within the plan area.

## SUMMARY OF THE GRAHAM COMMUNITY PLAN

The Graham Community Plan contains policies and implementing actions for five subject areas or elements: Land Use Element, Community Character and Design Element, Natural Environment Element, Economic Element, and the Facilities and Services Element.

### LAND USE ELEMENT

The Land Use Element addresses the location and intensity of land uses throughout the community. A complete description of land use designations and their implementing zone classifications can be found in this element.

### COMMUNITY CHARACTER AND DESIGN ELEMENT

The Community Character and Design Element addresses community character, historic and cultural resources, design (commercial, residential, signs, etc.), viewsheds and other aesthetics. This element contains policies that will guide the creation of implementing design standards and guidelines.

### NATURAL ENVIRONMENT ELEMENT

The Natural Environment Element examines the natural resources found in the area. The policies contained within this element address environmental concerns and guide future development with consideration of on-site environmental constraints and natural hazards.

## ECONOMIC ELEMENT

The Economic Element analyzes at the economy of the area and considers a myriad of opportunities to diversify the economic base. The policies within this element provide guidance on ways the community can enhance its economic environment.

## FACILITIES AND SERVICES ELEMENT

The Facilities and Services Element addresses infrastructure and services needed to support the proposed land use growth and development. Infrastructure includes capital facilities such as roads, trails, sewage disposal, parks, and utility lines. The policies within the community plan identify the capital improvements that are necessary to support the plan (sewers, water, sidewalks, etc.) and discuss potential partnerships and sources for funding opportunities.

## PLAN MONITORING

The Plan Monitoring section provides a framework both for monitoring the various actions undertaken to implement the plan and for offering recommendations to make adjustments to the actions in order to better fulfill each of the visions in the plan. This framework provides a means for measuring the effect of each action, identifies participants and their roles in monitoring the actions, lays out time frames for monitoring, and specifies how the monitoring program should be documented. Information from this program will be used in the next plan update cycle to help identify what changes the communities plan may need in order to attain specified goals and meet the visions in the plan.

## IMPLEMENTATION

The plan also contains proposed actions, located at the end of each element, which serve to implement various plan policies. These actions are grouped into short-term, mid-term and long-term endeavors. Short term actions should occur immediately or within one year of plan adoption. Mid-term actions should be completed within 2-5 years. Long term actions should be completed within 5-10 years of plan adoption. The party or parties responsible for leading the effort to complete the action item is listed in parenthesis following the action. Actions are assigned to a lead entity or entities as the primary responsible party to complete. Examples include the Graham Land Use Advisory Commissions (LUAC), Tacoma-Pierce County Health Department (TPCHD), Public Works & Utilities (PWU), Parks and Recreation (Parks), Economic Development (ED), Pierce County Sheriff, Pierce County Planning and Land Services (PALS) or other county departments or outside agencies and entities as noted.

## VISION STATEMENT

The greater Graham community, a vibrant, largely rural community, strives to enhance its country image while responding positively to the increasingly diverse needs and expectations of its citizens. It is a community that appreciates its history and maintains the best aspects of rural

living -- safe and peaceful neighborhoods, small town friendliness, affordability, and an abundance of natural beauty highlighted by the splendor of Mount Rainier. It maintains its distinctive natural environment by preserving open space, greenbelts, lakes, streams, wetlands, and agricultural areas. Planned growth is designed to enhance the community's rural atmosphere while protecting natural resources, and incorporates a level of public infrastructure to meet current and future needs. A variety of transportation modes are interconnected within the community, operate efficiently, and provide convenient access to nearby urban areas. Businesses, schools, fire district, law enforcement, and other community services are recognized as an important part of the community's resource base. A compact and attractive town center serves as the focal point for commerce and community activities for all ages. Passive and active parks, trails, and recreational facilities are accessible throughout the community.

# Chapter 2: Land Use Element

## INTRODUCTION

The Land Use Element of the Graham Community Plan provides direction regarding the location of different uses (residential, commercial, industrial, resource lands, etc.) and the density or intensity related to those uses (i.e., how many dwelling units or how big structures can be). This element serves to refine the policies contained in the Pierce County Comprehensive Plan and where the community plan provides more specific guidance or criteria regarding land uses, the provisions of this plan shall govern. In cases where this plan does not provide specific guidance, then the policies in the Pierce County Comprehensive Plan shall be used to determine land use objectives and standards. Finally, the policies contained in this element provide the foundation for changes to the County's Development Regulations including the zoning maps and codes.

## DESCRIPTION OF CURRENT CONDITIONS

### EXISTING LAND USES, VESTED PROJECTS, AND NONCONFORMING USES

#### EXISTING LAND USES

The Pierce County Assessor-Treasurer's Office (A/T's office) identifies information for current uses, acreage, and land ownership. The existing land uses within the plan area have been classified by the A/T's office into various categories such as residential, commercial, industrial, etc. Table F-1 provides specific information regarding existing land uses within the plan area including acreage, percent of plan area, and total parcels in each category. Map F-2 illustrates where these various land use categories are found within the plan area.

**Table F-1: Existing Land Uses**

Land Use	Acreage	Percent Of Plan Area	Total Parcels
<b>Built Environment</b>			
<b>Residential Categories</b>			
Single-Family	13,246.42	28.30	7,518
Duplex	80.73	0.17	56
Triplex	5.41	0.01	4
Fourplex	3.07	0.01	5
Multifamily (5 Or More Units)	7.75	0.02	1
Group Homes	0.00	0.00	0
Mobile Homes	6,342.01	13.55	2,642
Nursing/Retirement Homes	3.78	0.01	1

Land Use	Acreeage	Percent Of Plan Area	Total Parcels
College Dormitories	0.00	0.00	0
Residential Outbuildings	758.00	1.62	184
<b>Total Residential</b>	<b>20,447.17</b>	<b>43.69</b>	<b>10,411</b>
<b>Commercial Categories</b>			
Finance, Insurance, Real Estate, Professional	6.73	0.01	7
Eating/Drinking	5.46	0.01	7
Entertainment	292.06	0.62	17
Lodging	210.12	0.45	118
Automotive	31.07	0.07	16
General Commercial Service	170.72	0.36	45
Food	8.81	0.02	6
Automotive	33.07	0.07	5
Bldg. Material, Hardware, Farm Equip.	5.50	0.01	2
Furniture, Home Furnishings	2.59	0.01	2
Apparel And Accessories	0.75	0.00	1
General Retail Commercial	36.58	0.08	17
Wholesale Trade	16.87	0.04	4
Shopping Centers	16.22	0.03	7
<b>Total Commercial</b>	<b>836.55</b>	<b>1.78</b>	<b>254</b>
<b>Industrial Categories</b>			
Construction Services	0.64	0.00	1
Industrial Services And Repair	0.00	0.00	--
Warehousing	25.15	0.05	7
Manufacturing/Assembly	73.73	0.16	5
Other Industrial	11.44	0.02	1
<b>Total Industrial</b>	<b>110.96</b>	<b>0.23</b>	<b>14</b>
<b>Transportation/Communication/Utility</b>			
Transportation	174.40	0.37	94
Communication	7.12	0.02	6
Utilities	94.32	0.20	68
Other T/C/U	38.70	0.08	6
<b>Total T/C/U</b>	<b>314.54</b>	<b>0.67</b>	<b>174</b>
<b>Education</b>			
Education (K-12)	211.64	0.45	11

Land Use	Acreage	Percent Of Plan Area	Total Parcels
<b>Total Education</b>	<b>211.64</b>	<b>0.45</b>	<b>11</b>
<b>Public &amp; Quasi-Public Facility</b>			
Public Facilities	108.80	0.23	13
Quasi-Public Facilities, Public Assembly	1.83	0.00	3
Religious Assembly	57.82	0.12	16
Health Services	1.12	0.00	2
<b>Total Public &amp; Quasi-Public Facility</b>	<b>169.57</b>	<b>0.35</b>	<b>34</b>
<b>Total Built Environment</b>	<b>22,090.43</b>	<b>47.17</b>	<b>10,898</b>
<b>Unbuilt Environment</b>			
<b>Open Space/Recreation</b>			
Recreation, Non-Profit	200.47	0.43	33
Open Space	874.24	1.87	52
<b>Total Open Space/Recreation</b>	<b>1,074.71</b>	<b>2.30</b>	<b>85</b>
<b>Natural Resource Categories</b>			
Mineral Extraction	73.19	0.16	3
Forestry	7,835.05	16.74	263
Agriculture	5,028.10	10.74	269
<b>Total Natural Resource</b>	<b>12,936.34</b>	<b>27.64</b>	<b>535</b>
<b>Other</b>			
Vacant Use	10,408.39	22.24	2,543
Water Bodies	27.59	0.06	5
<b>Total Unbuilt Environment</b>	<b>24,447.03</b>	<b>52.24</b>	<b>3,168</b>
Uncategorized Land	272.99	0.59	108
<b>Total Graham Community Plan Area</b>	<b>46,810.45</b>	<b>100.00</b>	<b>14,174</b>

A little more than half the plan area is classified as unbuilt environment, primarily in the natural resource and vacant categories. Of the approximate 12,936 acres categorized as natural resource, 7,835 acres is in forestry use while 5,028 acres is being utilized for agriculture. These two uses represent over a quarter of the plan area (27%), while vacant lands comprise just under a quarter of the plan area (22%). The smaller number of total parcels for the unbuilt environment classification indicates that generally these uses are located on large sized parcels of land. The most prevalent use category within the built environment classification is residential (43%), with the majority designated as single family (28.3%). Residential categories cover over 22,447 acres of land throughout the plan area. Commercial and industrial uses represent only 2% of the total plan area situated on less than 1,000 acres land.



## VESTED PROJECTS

Washington State law allows for the vesting of land use and building applications. Vesting is a term that means a fully completed application is grandfathered to be reviewed (and a site subsequently developed) under the land use regulations that were in effect at the time that a fully completed application was submitted. In contrast to Washington’s vested rights doctrine, in most other states the regulations that apply to a project are those in effect on the date that the local government grants a permit. Many applications, especially those for longer-term project types such as formal subdivisions (preliminary and final plats) and short plats may be in the “pipeline” for years going through the review and approval process. The County has enacted vesting regulations which require vested applications (pending on July 28, 1996) that have remained in an inactive status be expired (i.e., become null and void) after a one-year time period has elapsed from notification to the property owner. The Hearing Examiner has the authority to grant a single, one-year time period extension to this requirement.

Any fully completed project applications submitted prior to January 1, 1995 were vested under the County’s pre-Growth Management Act (GMA) land use regulations, which established the comprehensive urban growth area (CUGA) and rural lands and associated residential densities. In some cases, pre-GMA vested applications for subdivisions of land contain a higher proposed residential density than is now allowed in the urban zones (e.g., MSF) or rural zones (e.g., Reserve 5 and Rural 10). Table F-2 provides a more detailed description of the pre-GMA vested, pending status formal subdivision applications. Map F-3: Vested Preliminary Plats identifies where the lands for these applications are located throughout the plan area.

**Table F-2: Vested Formal Subdivision Applications**

Locator #	Project Name	Zoning	Estimated Number of Vested Lots
1	Fairway Estates	RSV5	79
2	Noble Firs	RSV5	10
3	Heartland Homes	RSV5	143
4	Sporting Green Meadows	R10	37
5	Southwell Addition	R10	20
6	Summer Run	R10	24
7	Dayspring	RSV5	20
8	Park View Manor II	R10	7
9	Mountain View Plaza *	RAC	6
10	The Oaks	RSV5	Expired
11	Grand Firs	R10	402
12	Sterling Silver Estates	RSV5	25
13	Sunwood	R10	24
14	Ashton Court	MSF	24
15	Camary Lane	MSF	23

Locator #	Project Name	Zoning	Estimated Number of Vested Lots
16	Lost Creek Division II	R10	104
17	Barclay Place Division 2	MSF	49
18	Lipoma Firs North	MUD	1,259
19	Tiger View I & II	R10	8
20	Garden Oaks Div. I Phase II	RSV5	25
21	Country Ridge	R10 & R20	87
22	Golden Pond	R10	11
23	Erickson Subdivision	R10	12
24	Tanwax Ridge	R10	Expired
25	Foxbury Park PPD	MSF	149
26	Michael's Landing	MSF	27
27	Fairway Village South	MUD	81
28	Winterwood Park	MSF	235
29	Foxbury Park Division II	MSF	12
30	Thrift Pond	R10	19
31	Rhoades Country Estates	R10 & RSV5	8
<b>Total Number of Estimated Lots</b>			<b>2,930</b>

\* Records indicate that the applicant plans on developing commercial uses on five lots and a senior housing facility on remaining lot

The plan area contains approximately 31 active vested applications for formal subdivisions of land, with an estimated 2,930 new lots. Two of the applications, Dayspring and Tanwax Ridge, appear to be expired, which would trip conformance with existing land use regulations should the applicant wish to resubmit a new application for land division. Several of the applications exceed the current allowable density for either MSF or rural residential zones.

#### NONCONFORMING USES

A nonconforming use is a use or activity that was lawful prior to the adoption, revision, or amendment of the Comprehensive Plan or development regulation but that fails by reason of such adoption, revision, or amendment to conform to the present requirements of the Comprehensive Plan or development regulation. Title 18A, Pierce County Development Regulations – Zoning contains nonconforming use standards that regulate continued existence and expansion of existing, legal nonconforming uses. These standards allow for expansions in the rural area, through application of a nonconforming use permit, with no maximum cap on the percentage of increase. However, expansions are limited to the parcel on which the use was originally established.

## CURRENT COMPREHENSIVE PLAN DESIGNATIONS, ZONING CLASSIFICATIONS, AND OVERLAYS

Land use designations, zone classifications and overlays indicate the type, intensity and density of land uses authorized by the Comprehensive Plan. The 1994 Pierce County Comprehensive Plan, as amended, establishes 10 different land use designations within the plan area. These designations are implemented with 10 zones of the same names. One overlay (Mineral Resource Overlay) is located within the plan area; however, several other areas that function as overlays, such as Shoreline jurisdiction and open space corridors, are also found within the plan area and therefore warrant additional discussion. The Thun Field Airport Overlay, which lies just to the north of the plan boundary, is also included in this discussion because of its impact on and applicability to portions of the plan area. Some of these designations and zones, found inside the County's comprehensive urban growth area (CUGA) are intended for urban levels of development and uses. Other designations and zones apply to rural and natural resource areas.

The CUGA boundary traverses the northern portion of the plan area generally located at 208th St. E. and jogs at Meridian north to 200th St. E. Rural designations and natural resource designations are located outside identified urban growth areas (UGAs) and the amount of public facilities directed within these areas is very limited, with one key provision being the prohibition on extension of sewer service into these rural areas. It should also be noted that the County's specified land use designations may not be consistent with the existing uses described in the previous section, which results in a nonconforming use status.

Table F-3 depicts the various comprehensive plan designations, zoning classifications, and overlays, contained in the plan area. Map F-4: Historic Land Use Designations illustrates geographically where these land uses are applied.

**Table F-3: Comprehensive Plan Land Use Designations, Zoning Classifications and Overlays**

Land Use Designations, Zones And Overlays <sup>(1)</sup>	Acreage	Percent Of Plan Area
<b>Urban Designations And Zones</b>		
Employment Center (EC)	17.47	.04
Mixed Use District (MUD)	669.37	1.37
Moderate Density Single-Family (MSF)	1,283.47	2.62
<b>Total Urban</b>	<b>1,970.31</b>	<b>4.03</b>
<b>Rural Designations And Zones</b>		
Rural Activity Center (RAC)	440.73	.90
Rural Neighborhood Center (RNC)	83.14	.17
Reserve 5 (Rsv5)	3,679.18	7.52
Rural 10 (R10)	36,268.52	74.09
Rural 20 (R20)	1,438.77	2.94
<b>Total Rural</b>	<b>41,910.34</b>	<b>85.62</b>
<b>Natural Resource Designations And Zones</b>		

Land Use Designations, Zones And Overlays <sup>(1)</sup>	Acreage	Percent Of Plan Area
Designated Forest Land	2,233.16	4.56
Agricultural Resource Land	2,838.21	5.79
<b>Total Natural Resource</b>	<b>5,071.37</b>	<b>10.35</b>
<b>Total<sup>(2)</sup></b>	<b>48,952.02</b>	<b>100.00%</b>
<b>Overlays<sup>(2)</sup></b>		
Mineral Resource Overlay (MRO)	365.76	.75
Airport Overlay (AO)	0.00	0.00
Open Space Corridor Overlay	28,289.00	57.79
<b>Total Overlay Area</b>	<b>28,654.76</b>	<b>58.54</b>

The Comprehensive Plan And Development Regulations Contain More Land Use Designations, Zoning Classifications And Overlays Than Those Listed In Table F-3 And Discussions Of These Other Unlisted But Available Land Use Designations, Zones, And Overlays May Be Found In The Pierce County Comprehensive Plan And Zoning Code.

Overlays Are Applied Over An Underlying Land Use Designation And Zone And Are Therefore Not Calculated In The Total Land Acreage For The Plan Area.

The Moderate Density Single-Family (MSF); Reserve 5; and Rural 10 and 20 land use designations and zones are intended to primarily accommodate residential uses. The Mixed Use District (MUD), Rural Activity Center (RAC), and Rural Neighborhood Center (RNC) zones provide for a range of commercial and light industrial activities. The Employment Center (EC) zone allows for heavy industrial and warehousing uses. Natural resource uses are facilitated in the Designated Forest Land (FL), Agricultural Resource Lands (ARL), and Mineral Resource Overlay (MRO) designations/zones. The Airport Overlay (AO) addresses compatibility issues between public use airports and adjacent land uses; however, this overlay has not yet been applied in the plan area. The zones vary by the level of density and intensity that is allowed. Each land use designation/zone classification contained within the plan area is described in greater detail below.

#### EMPLOYMENT CENTER

The Employment Center (EC) designation and zone is located within the CUGA and allows for industrial, manufacturing, warehousing, and related office and service jobs. Within these categories a variety of uses may occur including product assembly, fabrication, processing, heavy trucking, wholesale activities, corporate office, and office park development. Some commercial uses that are subordinate to and supportive of employment uses are also permitted. There are 17 acres of designated EC, located along SR 7 just south of 224th St. E., which represents less than .04% of the total plan area.

#### MIXED USE DISTRICT

The Mixed Use District (MUD) designation and zone is located within the CUGA and offers opportunities for auto-oriented commercial and land intensive commercial uses along major arterials, state highways, and major transit routes. Commercial activity within a MUD is intended to serve a customer base beyond the surrounding neighborhoods or community. The MUD also allows a mixture of high density residential uses. The plan area contains 669 acres of

MUD, comprising a little over one percent of the total plan area. There are two places with MUD designation/zoning; one area is located north of 200th St. E. on either side of SR 161 and the other area is situated along SR 7 at the intersection with 224th St. E.

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#### MODERATE DENSITY SINGLE-FAMILY

The Moderate Density Single-Family (MSF) designation and zone is located within the CUGA and provides areas for urban level single-family and two-family residential development at densities of two to six dwelling units per acre. The “bright-line” for urban level residential development has been established through Puget Sound Growth Hearings Board decisions to be four dwelling units per acre. This designation and zone is located north of 208th and 200th Streets E. and encompasses less than 3% (1,283 acres) of the total plan area.

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#### RURAL ACTIVITY CENTER

The Rural Activity Center (RAC) designation and zone create areas where residents can gather, work, shop, and entertain, and tourists traveling to outlying recreation areas can obtain needed services. A broad range of commercial, service, and residential uses is envisioned within a RAC. These areas should have immediate access onto state routes or major arterials and should be configured to provide an alternative to the strip development typically found along these types of road systems. There are two RACs within the plan area; one located at SR 161 centered in the vicinity of 224th St. E. (Graham) and the other at the intersection of SR 161 and 304th St. E. (Benston). There are currently 440 acres designated/zoned RAC, representing less than 1% of the total plan area.

The Pierce County Comprehensive Plan outlines specific location, size and expansion criteria for RACs including:

- RACs should be located no closer than five miles from any satellite city UGA or the CUGA boundary.
- RAC boundaries may only be expanded if an evaluation of existing developable lands and unoccupied commercial building square footage demonstrates a need for more land and the expansion area comes no closer than five miles to a UGA or CUGA as described above.
- Proposed expansions of RACs should be compatible with other adjacent uses and should not go into areas of natural hazards.
- New RACs should not exceed 125 acres in size.

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#### RURAL NEIGHBORHOOD CENTER

The Rural Neighborhood Center (RNC) designation and zone provides for limited convenience shopping, services, and residential uses consistent with density allowed in surrounding designation(s), and should have immediate access onto state routes, major arterials, or secondary arterials. There are six RNCs within the plan area situated on 83 acres, which constitutes less than 1% of the total plan area. The RNCs are located in the following areas:

- SR 7 at the intersection with 260th St. E. (Rocky Ridge).

- SR 7 at the intersection with 304th St. E. (Johnson’s Corner).
- SR 7 at the intersection with SR 702/352nd St. E. (Eatonville Cutoff).
- Orting-Kapowsin Highway at the intersection with Kapowsin Highway East (Kapowsin).
- Orting-Kapowsin Highway at the intersection with 224th St. E. (Thrift).
- 208th St. E. at the intersection with 54th Ave. E. (Shady Acres).

The Pierce County Comprehensive Plan outlines specific location, size and expansion criteria for RNCs including:

- RNCs should be located no closer than two miles from any satellite city UGA or the CUGA boundary.
- RNC boundaries may only be expanded if an evaluation of existing developable lands and unoccupied commercial building square footage demonstrates a need for more land and the expansion area comes no closer than two miles to a UGA or CUGA as described above.
- RNCs that provide for development in a continuous strip pattern along road systems is discouraged.
- RNCs should be of a scale and intensity that is appropriate for maintaining a rural character.

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#### RESERVE 5

The Reserve 5 (Rsv 5) designation and zone was established to accommodate expansions of the UGA at such a time in the future when the land capacity within the CUGA or satellite city’s UGA has been depleted. The Rsv 5 allows for residential development at a density of one dwelling unit per five acres, with the criteria that proposed lot sizes shall not exceed 12,500 square feet (except that new lots may be increased to 21,780 square feet in the Rsv 5 when residential densities are reduced to one unit per ten acres) and shall be clustered in groups of not more than 12 lots. The plan area contains 3,679 acres of Rsv 5, which represents a little more than 7% of the total plan area. This land use designation and zone is located in the northwest portion of the plan area and generally contains an existing land use pattern of smaller platted lots. The southern edge of the Rsv 5 was established along the boundary between the Chambers Clover Creek Watershed (WRIA 12) and the Nisqually Watershed (WRIA 11).

The Pierce County Comprehensive Plan establishes specific criteria for expansion of the CUGA or a UGA into the Reserve designations including:

- Land capacity within the CUGA or UGA is evaluated and the need for additional land capacity is clearly demonstrated.
- The housing affordability and density objectives of applicable comprehensive plans have been monitored and evaluated.
- Demonstration that adequate public facilities and services can be provided to service urban development and ensure a high quality of life.
- Adequate land use regulations are in place to discourage sprawl and strip development.

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## RURAL 10 AND RURAL 20

The Rural 10 (R10) and Rural 20 (R20) designations and zones provide for a range of low density residential uses. The intent is to accomplish a rural land use pattern that promotes rural uses, while not requiring urban level services. Cluster development is encouraged within rural residential designations and zones and density bonuses are provided within developments for the dedication of permanent open space. One accessory dwelling unit is also allowed on a residential lot where an existing single-family dwelling exists. The designation and zone number (e.g., 10) represents the base number of acres required per primary dwelling unit (du) as follows:

- R10 allows a density of one du per 10 acres with a density incentive of two dwelling units per 10 acres when 50% of the property is dedicated as open space.
- R20 allows a density of one du per 20 acres with a density incentive of two dwelling units per 20 acres when 50% of the property is dedicated as open space (note: open space dedications shall be located in an area adjacent to Designated Forest Lands zones).

The majority of the plan area (74%) is designated as R10 (36,268 acres). There are 1,438 acres of R20 land (almost 3% of the plan area), which are mostly located in the eastern portion of the plan area near the fringe of designated forest land.

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## DESIGNATED FOREST LAND

The Designated Forest Land (FL) designation and zone are intended to provide an adequate supply of forest lands for long-term commercial timber harvesting activities. The FL designation and zone allow for timber harvesting, associated forestry activities, and limited residential development at a density of one du per 80 acres. The plan area contains 2,233 acres of FL, which is almost 5% of the total plan area. This designation/zone is located along the eastern edge of the plan boundary.

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## AGRICULTURAL RESOURCE LAND

The Agricultural Resource Land (ARL) designation and zone represent lands that have been designated as having long-term commercial agricultural significance. The lands within this category meet the minimum guidelines outlined in WAC 365-190-050 and are comprised of lands that are primarily devoted to the commercial production of horticultural, viticultural, floricultural, dairy, apiary, vegetable, or animal products, or of berries, grain, hay, straw, turf, seed, Christmas trees not subject to the excise tax imposed by RCW 84.33.100 through 84.33.140, finfish in upland hatcheries, or livestock, and that has long-term commercial significance for agricultural production.

Designation of agricultural lands of long-term commercial significance requires consideration of growing capacity, productivity, and soil composition of the land for long-term commercial production and parcel size and proximity to other uses for long-term viability of agricultural use. Urban lands, lands that are already characterized by urban growth and designated forest lands are excluded from this designation. The Comprehensive Plan ARL policies provide specific



criteria for removal of lands from the ARL designation, which includes amendment through adoption of a community plan.

In addition to farming or ranching activities, the ARL designation/zone also allows one du per 10 acres and limited development related to agriculture. Community plans may provide for variations in the density and uses allowed under prescribed guidelines. A community plan may also provide for some civic uses (religious assemblies, small public safety stations such as fire and police) on ARLs following specific criteria.

About 5% of the plan area is designated ARL, situated on 2,838 acres of land. Designated ARLs occur in a scattered pattern but the majority of these lands are generally located in the central and southern portions of the plan area.

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#### MINERAL RESOURCE OVERLAY

The Mineral Resource Overlay (MRO) identifies lands that are intended for long-term mineral extraction activities. Typically, lands designated as MRO have an existing surface mining operation that has been permitted through the Washington State Department of Natural Resources (WDNR) and a County issued conditional use permit or historic unclassified use permit, which dictates time limitations, performance standards during mining activities, and reclamation actions.

There are 365 acres of designated MRO land within the plan area, representing less than 1% of the total land area. These lands are located in the extreme northeast corner of the plan area and at the southeast corner of 224th St. E. and Mountain Highway (Elk Plain Road Shop). All of the land within the plan area designated as MRO is currently owned by Pierce County – Public Works and Utilities Department.

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#### AIRPORT OVERLAYS

The Growth Management Act (RCW 36.70A) recognizes the inherent social and economic values of aviation. The law specifically lists public use airports as essential public facilities (RCW 36.70A.200) and requires counties and cities to protect general aviation airports from incompatible development (RCW 36.70A.510 & 547) with implementation through comprehensive plan policies and development regulations.

The Pierce County Comprehensive Plan and Zoning Regulations contain policies and land use regulations regarding lands that are located around airports. The intent of these policies/regulations is to minimize land use incompatibilities and reduce risks to life safety through establishment of performance standards, maximum building coverages, limitations on the number of persons on site at any one time, or requirements to construct buildings with noise attenuation features.

The Zoning Code establishes an Airport Overlay Zone that provides specific standards for the Pierce County (Thun Field) Airport area of influence. The recently adopted South Hill Community Plan identifies the area of influence for the Pierce County Airport. Part of this area of influence (4-outer safety zone and 6-traffic pattern zone) covers the northern portion of the plan area (see Map F-6: Pierce County Airport - Thun Field Area of Influence). Maximum height



limits within this area of influence are prescribed through Federal Aviation Administration standards, which are illustrated in Map F-7: Pierce County Airport - Thun Field Object Height. However, the current Zoning Code regulations only apply within the South Hill Community Plan area and do not apply to the affected area within the Graham Community Plan boundaries.

The Zoning Code also contains a Rural Airport Overlay (RAO) that includes standards for airports in designated rural lands. This overlay provides use and density restrictions intended to protect the airport from neighboring land uses that are incompatible with aviation activities and buffer requirements designed to minimize impacts between the different uses.

The plan area does not currently have any RAO despite the fact that there are several small, residential airfields located within the plan area. According to the Washington State Department of Transportation, Shady Acres Airport is considered a Public Use Airport and as such should receive consideration for an Airport Overlay.

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#### SHORELINE JURISDICTION

The Shoreline Management Act (RCW 90.58) provides for the management of water bodies or watercourses identified as Shorelines of the State. Areas under jurisdiction of the SMA include the water body/course, all lands within 200 feet of the ordinary high water mark, and associated wetlands and floodplains.

The Pierce County Shoreline Master Program and Shoreline Management Use Regulations identify policies and land use regulations for designated shorelines. The Shoreline Management Use Regulations establishes a shoreline jurisdiction; provides five different shoreline environment categories; outlines allowable uses, densities, bulk standards such as setback requirements within these environments; and identifies permit processes for each type of proposed use. The five types of shorelines environments include Urban, Rural Residential, Rural, Conservancy, and Natural. These environments are similar to zoning designations in that they allow different land uses, densities and activities ranging from the most intensive uses (Urban) to very limited uses (Natural).

The plan area contains four of the five designated shoreline environments including: Rural Residential, Rural, Conservancy, and Natural. Designated shorelines within the plan area are described and mapped in greater detail in the Natural Environment Element, Description of Existing Conditions.

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#### CRITICAL AREA

The Growth Management Act (RCW 36.70A) requires local jurisdictions to adopt regulations addressing critical areas. Critical areas are defined under five categories including: wetlands, frequently flooded areas, geologically hazardous areas (landslide, erosion, seismic, mine, and volcanic), aquifer recharge areas, and fish and wildlife habitat conservation areas. The County's Critical Area Regulations, as amended, act as an overlay by providing standards for development in and adjacent to critical areas that may affect the location, density and intensity, layout and design of proposed development as envisioned in the various land use designations and zones.

Title 18A, Development Regulations-Zoning sets forth criteria for calculating the allowable number of dwelling units. Within urban zone classifications the allowable number of dwelling units (i.e., allowable density) is calculated by multiplying the net developable acreage of the site by the allowed density in dwelling units/acre. Net developable acreage is determined by removing the total amount of land designated as environmentally constrained from the total parcel size. Environmentally constrained land is defined as erosion hazard areas, landslide hazard areas, and wetlands (as set forth in the Critical Area Regulations) and all land below the ordinary high water mark of lakes, streams, ponds, and tidal waters. This provision does not apply to rural zone classifications, in which density is calculated based on gross site acreage.

There are a variety of critical areas scattered throughout the plan area. Critical areas within the plan area are described and mapped in greater detail in the Natural Environment Element, Description of Existing Conditions.

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#### OPEN SPACE CORRIDOR

The Growth Management Act (RCW 36.70A) contains a goal to encourage the retention of open space [36.70A.020(9)]. The GMA also requires local jurisdictions to provide for open space corridors and greenbelts within and between urban growth areas and explicitly states that these open space corridors include lands useful for recreation, wildlife habitat, trails, and connection of critical areas.

The Pierce County Comprehensive Plan contains policies that address open space. Map F-8: Open Space Corridors identifies the designated open space corridors throughout Pierce County, which is based upon high priority open space categories (fish and wildlife habitat, wetlands, rivers, streams, creeks, marine waters, and wooded areas). These designated open space areas serve as an overlay in which more detailed land use regulations can be applied to accomplish the preservation of open space corridors. For example, special requirements and standards contained within Title 18A, Zoning and Title 18J, Design Standards and Guidelines can be utilized within open space corridor overlay areas. In addition, several County programs address open space preservation, including the Conservation Futures Program (fair market value acquisition of properties and conservation easements for open space purposes) and the Current Use Assessment Program-Open Space (tax reductions given to retain property in an open space condition).

The plan area contains 28,289 acres of land identified within the open space corridor overlay. These areas are described and mapped in greater detail in the Natural Environment Element, Description of Existing Conditions.

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#### SOLID WASTE FACILITIES

The Graham Community Plan area contains the County's main solid waste landfill facility, which is located at 304th Street East and east of SR 161. This landfill was authorized pursuant to Conditional Use Permit CP8-89/AE9-95/AE10-95. Solid waste handling facilities are listed in the Growth Management Act as essential public facilities [RCW, 36.70A.200 (1)]. This section of the Act requires each County and City planning under GMA to include a process for identifying and siting essential public facilities. In addition, the Pierce County Comprehensive Plan and Solid

Waste Plan identify this landfill as a public facility. However, this facility is currently not labeled with an essential public facility overlay. Consideration should be given to application of an essential public facility – solid waste facility to this landfill facility. This would be consistent with what has been done for other essential public facilities such as creating an airport overlay for Thun Field Airport and Tacoma Narrows Airport or a state corrections overlay for McNeil Island State Corrections Center.

## VACANT, REDEVELOPABLE, AND UNDERDEVELOPED LANDS AND VACANCY RATES

As described above, many of the Pierce County Comprehensive Plan policies require an analysis of existing developable lands and unoccupied commercial building square footage that demonstrates a need for additional lands prior to proposing expansions of various land use designations and zones. The amount of vacant, redevelopable, and underdeveloped lands provides part of this analysis. Evaluating the amount of available commercial space and the limitations on future development also affects such decisions.

### VACANT LANDS

Vacant lands include unimproved parcels and also properties that have had structures removed or where uses, such as farming, have been abandoned. The vacant category does not include lands that are being used for agricultural or forestry purposes or that may be large parcels with a single-family dwelling, as these lands would be classified as agricultural, designated forest land, or single family.

Table F-4 provides an analysis of the amount of vacant acreage throughout the plan area and the percentage this represents. Map F-9: Vacant Land illustrates where these parcels are located.

**Table F-4: Vacant Parcels by Land Use Designation**

Land Use Designation	Acreage of Vacant Parcels	Percent of Vacant Acreage
Employment Center	0.00	0.00
Moderate Density Single-Family	281.64	21.94
Mixed Use District	181.99	27.19
Rural Activity Center	136.26	30.91
Rural Neighborhood Center	41.92	50.42
Rural 5	745.02	20.25
Rural 10	8,564.81	23.61
Rural 20	395.88	27.52
Designated Forest Land	21.85	0.98
Agricultural Resource Land	444.14	15.65
<b>Total Within Plan Area</b>	<b>10,813.51</b>	<b>---</b>

Table F-5 identifies the amount of total acreage and vacant acreage within each individual commercial and industrial center. This table also illustrates the total percentage the quantity of vacant represents within the center.

**Table F-5: Vacant Commercial & Industrial Land by Center**

Center Name & Location	Total Acreage <sup>(1)</sup>	Acreage of Vacant Parcels	% of Vacant Acreage
Elk Plain EC (SR 7 south of 224th St. E.)	17.47	0.00	0.00
Meridian MUD (SR 161 north of 200th St. E.)	565.35	180.93	32.00
Elk Plain MUD (SR 7 and 224th St. E.)	104.02	1.06	1.01
Graham RAC (SR 161 and 224th St. E.)	370.74	110.73	29.87
Benston RAC (SR 161 and 304th St. E.)	69.99	25.53	36.48
Shady Acres RNC (208th St. E. and 54th Ave. E.)	6.24	6.24	100.00
Rocky Ridge RNC (SR 7 and 260th St. E.)	41.33	25.83	62.50
Johnson's Corner RNC (SR 7 and 304th St. E.)	2.20	0.00	0.00
Eatonville Cutoff RNC (SR 7 and SR 702/352nd St. E.)	5.80	4.02	69.31
Kapowsin RNC (Orting Kapowsin Hwy and Kapowsin Hwy E.)	11.22	2.89	25.75
Thrift RNC (Orting Kapowsin Hwy and 224th St. E.)	16.35	2.94	17.98
<b>Total in Centers</b>	<b>1,210.71</b>	<b>360.17</b>	<b>---</b>

(1) This is the total acreage of the RAC or RNC which may include land area outside the Graham Community Plan boundaries.

Vacant lands account for 10,813 acres of land within the plan area, representing almost one-quarter of the total plan area. The majority of vacant lands are located within the R10 designation/zone. However, some of this land area may be currently utilized for unaccounted agricultural or forestry activities. There are 360 acres of vacant land in the commercial and industrial centers located within the plan area. The total amount of vacant land within commercial and industrial designations signifies that there is currently room for additional new development; however, a more detailed analysis is warranted to determine if expansion should be proposed for any of the individual centers. Most of the centers have large vacant land areas. Several areas (Elk Plain EC, Johnson's Corner RNC, and Thrift RNC) have no vacant lands and the Mixed Use District in Elk Plain has a small level (1.01%) of vacant acreage. This situation may indicate a need to increase the size of these centers to accommodate future growth but this should be evaluated in conjunction with whether the total amount of redevelopable lands is also low and consistency with the GMA provisions for Limited Areas of More Intensive Rural Development (LAMIRD) criteria.

#### REDEVELOPABLE AND UNDERDEVELOPED LANDS

Redevelopable commercial and industrial parcels are zoned for commercial or industrial uses with a land value greater than or equal to the improved value. Underdeveloped residential parcels are either zoned for residential uses where the existing land use is residential, with an

area greater than or equal to 43,560 square feet, or zoned for commercial that allows residential uses where the existing land use is residential with an area greater than or equal to one-quarter acre. Underdeveloped only applies to urban land use designations.

Table F-6 provides an overview of redevelopable and underdeveloped lands. Map F-10: Underdeveloped and Redevelopable Land illustrates where these parcels are located in the plan area.

**Table F-6: Redevelopable Commercial & Industrial Land and Underdeveloped Residential Parcels by Land Use Designation**

Land Use Designation	Redevelopable Parcels		Underdeveloped Parcels	
	Acreage	Percent	Acreage	Percent
Employment Center	1.89	0.0000	--	--
Moderate Density Single-Family	--	--	502.01	0.0107
Mixed Use District	324.28	0.0069	12.79	0.0003
Rural Activity Center	149.37	0.0032	--	--
Rural Neighborhood Center	3.22	0.0001	--	--
Rural 5	--	--	--	--
Rural 10	--	--	--	--
Rural 20	--	--	--	--
Designated Forest Land	--	--	--	--
Agricultural Resource Land	--	--	--	--
<b>Total Plan Area</b>	<b>480.76</b>	<b>0.0102</b>	<b>514.80</b>	<b>0.0110</b>

There are a total of 480 acres of properties identified as redevelopable within the commercial and industrial centers. Within the MUD designation/zone, there are 324 acres identified as redevelopable for commercial uses and 149 acres within the RACs. The MSF designation and zone has 502 underdeveloped parcels for residential uses. This reflects the fact that single-family dwelling units are situated on larger, more rural sized parcels. Only 12.79 acres within the MUD designation/zone are identified as underdeveloped which indicates that there is currently single-family or some other types of residential uses mixed in with the commercial uses.

Table F-7 identifies the amount of total acreage and redevelopable acreage within each individual commercial and industrial center. This table also depicts the total percentage the quantity of redevelopable land represents.

**Table F-7: Redevelopable Commercial & Industrial Land by Center**

Center Name & Location	Total Acreage	Redevelopable Acreage	% of Redevelopable Parcels
Elk Plain EC (SR 7 south of 224th St. E.)	17.47	1.89	10.81
Meridian MUD (SR 161 north of 200th St. E.)	565.35	258.13	45.65

Center Name & Location	Total Acreage	Redevelopable Acreage	% of Redevelopable Parcels
Elk Plain MUD (SR7 and 224th St. E.)	104.02	66.15	63.59
Graham RAC (SR161 and 224th St. E.)	370.74	109.86	29.63
Benston RAC (SR161 and 304th St. E.)	69.99	39.51	56.45
Shady Acres RNC (208th St. E. and 54th Ave. E.)	6.24	0	0
Rocky Ridge RNC (SR7 and 260th St. E.)	41.33	0	0
Johnson's Corner RNC (SR7 and 304th St. E.)	2.20	1.15	52.27
Eatonville Cutoff RNC (SR7 and SR702/352nd St. E.)	5.80	1.04	17.93
Kapowsin RNC (Orting-Kapowsin Hwy and Kapowsin Hwy E.)	11.22	1.03	9.18
Thrift RNC (Orting-Kapowsin Hwy and 224th St. E.)	16.35	0	0
<b>Total</b>	<b>1,210.7 1</b>	<b>478.76</b>	<b>---</b>

Nearly half (45%) of the properties within the Meridian MUD and over half (63%) of the properties in the Elk Plain MUD are considered redevelopable. The Graham RAC has 109 acres that are redevelopable, which represents approximately one-third (29%) of the total properties. The Shady Acres RNC indicates zero redevelopable properties but the entire six acres are also listed as vacant (see Table F-4). The Thrift RNC has no redevelopable parcels; however several of the properties within the RNC contain single-family/mobile homes that could possibly convert to or redevelop as commercial uses. The Kapowsin RNC has a small percentage (9%) of redevelopable parcels.

#### VACANCY RATES

A windshield survey of tenant space vacancy within the plan areas' MUDs and RACs was conducted in September 2003. This information was used during discussions regarding the size of commercial centers within the plan area. At that time very little vacant (leasable) space was available. The survey found two spaces in Graham Square, three spaces in Graham Town Center, one space in Bethel Station (in the Time Oil building), and one space north of the barber shop. About 15,200 sq. ft. of vacant commercial space was identified, out of the 425,575 sq. ft. estimated to exist in the Graham MUD and RAC zones, which reflects a vacancy rate of about 3.57%.

### RURAL DEVELOPMENT CRITERIA AND LIMITED AREAS OF MORE INTENSIVE RURAL DEVELOPMENT (LAMIRD) EVALUATION

#### GROWTH MANAGEMENT ACT REQUIREMENTS FOR RURAL DEVELOPMENT

The Growth Management Act (GMA) was enacted to prevent the inappropriate conversion of undeveloped land into sprawling, low-density development and development that conflicts with agricultural and forestry activities. Contained within the GMA are specific criteria for what

constitutes rural development. Acceptable rural uses include rural residential development, forestry and agriculture. Rural areas may also provide for a variety of rural densities, uses, essential public facilities, and rural governmental services needed to serve the permitted densities and uses.

In 1997, the GMA was amended to include new criteria for limited areas of more intensive rural development (LAMIRD). The LAMIRD criteria allows for limited areas of more intensive rural development, including necessary public facilities and public services to serve a limited area. Limited areas are defined as infill, development or redevelopment of existing commercial, industrial, residential, or mixed-use areas, whether characterized as shoreline development, villages, hamlets, rural activity centers, or crossroads developments. Development or redevelopment (in terms of building size, scale, use or intensity) within these areas shall be consistent with the character of the existing areas. Development and redevelopment may include changes in use from vacant land or a previously existing use so long as the new use conforms to an existing area or existing use that was in existence on or before July 1, 1990.

More intensive rural development may also include small-scale recreational or tourist uses, including commercial facilities to serve those recreational or tourist uses, which rely on a rural location and setting, but that do not include new residential development. A small-scale recreation or tourist use is not required to be principally designed to serve the existing and projected rural population. Public services and public facilities shall be limited to those necessary to serve the recreation or tourist use and shall be provided in a manner that does not permit low-density sprawl.

The LAMIRD criteria also allows for the intensification of development on lots containing isolated nonresidential uses or new development of isolated cottage industries and isolated small-scale businesses that are not principally designed to serve the existing and projected rural population and nonresidential uses, but do provide job opportunities for rural residents. Rural counties may allow the expansion of small-scale businesses as long as those small-scale businesses conform to the rural character. Public services and public facilities shall be limited to those necessary to serve the isolated nonresidential use and shall be provided in a manner that does not permit low-density sprawl.

Each county is tasked with the responsibility to adopt measures to minimize and contain the existing areas or uses of more intensive rural development, as appropriate. Lands included in such existing areas or uses shall not extend beyond the logical outer boundary of the existing area or use, thereby allowing a new pattern of low-density sprawl. Existing areas are those that are clearly identifiable and contained and where there is a logical boundary delineated predominately by the built environment, but that may also include undeveloped lands if limited. In establishing the logical outer boundary the following shall be addressed: the need to preserve the character of existing natural neighborhoods and communities; physical boundaries such as bodies of water, streets and highways, and land forms and contours; the prevention of abnormally irregular boundaries; and the ability to provide public facilities and public services in a manner that does not permit low-density sprawl.



PIERCE COUNTY COMPREHENSIVE PLAN POLICY REGARDING LAMIRD

In 2004, Pierce County initiated a review to complete the 10-year update of the Comprehensive Plan as required by the GMA. The update process included reviewing any new provisions that were incorporated into the GMA since the County adopted its Comprehensive Plan in 1994. One of the issues raised was the new LAMIRD criteria and the need to conduct an evaluation of all the Rural Centers (Rural Activity Centers and Rural Neighborhood Centers) in the County. The County Council made the policy choice to conduct this evaluation at the community plan scale. A new policy was incorporated into the Pierce County Comprehensive Plan that states upon the initiation or update of a community plan in the rural area of the County, all rural centers shall be evaluated and updated as necessary to be consistent with GMA provisions in RCW 36.70A.070(5) for LAMIRDs. This policy became effective on February 1, 2005 and applies to the Graham Community Plan process.

LAMIRD EVALUATION OF THE RURAL CENTERS

Review of the Rural Activity Centers and Rural Neighborhood Centers logical outer boundaries and uses consisted of a determination of what uses were in existence within the current Rural Center boundaries on or before July 1, 1990; what commercial or industrial uses were developed between July 1, 1990 and the present; what parcels contain vested applications for a commercial or industrial use; vacant lands; and other low density residential (mobile homes, single family) or agricultural uses. While the GMA establishes a July 1, 1990 date for determining logical outer boundaries and uses it is also important to consider uses that were developed in legal conformance with the applicable regulations during the time period that spans between 1990 and today. These uses either relied upon the previous non-GMA zoning or on the RAC and RNC zoning to develop. Applications for conforming uses have a vested right to develop under the regulations that were in place at the time of application.

The following text, tables, and Map F-11 through Map F-18 illustrate the LAMIRD evaluation for each rural center. A series of maps for each rural center visually depict the uses in place on or before July 1, 1990, uses developed between 1990 and today, vacant lands, vested applications and other types of uses (i.e., single-family, single-wide or double-wide mobile homes, etc.). The Rural Activity Centers and Rural Neighborhood Centers contain a range of uses that are more intensive than single-family residential, such as commercial, industrial and civic uses. These uses include mixed retail, business offices, grocery stores, sales of general merchandise, personal services, banks, churches, schools, auto repair and service facilities, fire stations, warehouses, medical and veterinary offices, restaurants and taverns, granges, and manufacturing. Table F-8 provides a more detailed description of uses and vested applications for each rural center.

Table F-8: LAMIRD Analysis of Uses in Rural Centers

1990 Uses <sup>(1)</sup>	Current Uses <sup>(2)</sup>	Vested Applications
<b>Graham RAC (SR 161 and 224th St. E.)</b>		
Mixed Retail/Office	Auto Salvage & Parts	Pet Clinic
Medical Office	Service Garage	Commercial Binding Site Plan



1990 Uses <sup>(1)</sup>	Current Uses <sup>(2)</sup>	Vested Applications
Shopping Center	Office	
Restaurant	Shopping Center	
Bank	Mini-Mart/Gas Station	
Church	Medical Office	
Food Store	Junior High School	
Post Office		
Fire Station		
Warehouse		
Veterinary Clinic		
Mobile Home Park		
Church		
<b>Benston RAC (SR 161 and 304th St. E.)</b>		
Mini-Mart/Gas Station	None	None
<b>Shady Acres RNC (208th St. E. and 54th Ave. E.)</b>		
Vacant	Vacant	None
<b>Rocky Ridge RNC (SR 7 and 260th St. E.)</b>		
Realty Office	Mini-Warehouse	None
Mini-Mart/Gas Station	Manufacturing	
<b>Johnson's Corner RNC (SR 7 and 304th St. E.)</b>		
Warehouse/Office	Warehouse	None
Tavern		
Mini-Mart/Gas Station		
<b>Eatonville Cutoff RNC (SR 7 and SR 702/352nd St. E.)</b>		
None	None	Fuel Station (in portion of RNC outside plan area)
<b>Kapowsin RNC (Orting-Kapowsin Hwy and Kapowsin Hwy E.)</b>		
Grocery Store	None	None
Fire Station		
Grange		
Post Office		
Tavern		
<b>Thrift RNC (Orting-Kapowsin Hwy and 224th St. E.)</b>		
General Store	None	None
Storage/Warehouse		
Contractor Yard Type Use		

**1990 Uses<sup>(1)</sup>****Current Uses<sup>(2)</sup>****Vested Applications**

(1) Uses that existed on or before July 1, 1990 that are considered more intensive than single-family residential development. These uses may be commercial, industrial or civic in nature.

(2) Uses that developed between 1990 and present time under current zoning provisions for RACs and RNCs.

### GRAHAM RAC (SR 161 AND 224TH ST. E.)

The uses in existence before July 1, 1990 form a logical outer boundary of the rural commercial center located at the intersection of SR 161 and 224<sup>th</sup> St. E. In addition, 232<sup>nd</sup> Street East, 234<sup>th</sup> Street East and a railroad right-of-way provide a logical outer boundary at the southern boundary. There is a range of commercial and light industrial uses that were in existence on or before July 1, 1990 and that were developed between 1990 and today. In addition, there are several vested applications for commercial uses within this RAC.

### BENSTON RAC (SR 161 AND 304TH ST. E.)

Within the Benston RAC there is a gas station/mini-mart located at the northeast corner of the intersection which was established before July 1, 1990. The parcel at the northwest corner of that intersection contains a hay and portable building sales operation. The two parcels at the southwest corner are developed with a vacant house and pole building that have historically accommodated several commercial uses including a restaurant, beauty salon, and sign business. The other parcels within the RAC are vacant and, as of the writing of this plan, there are no vested applications for development proposals on any of these properties.

### SHADY ACRES RNC (208TH ST. E. AND 54TH AVE. E.)

The Shady Acres RNC is currently comprised of one vacant parcel and, as of the writing of this plan, there is no vested application for a development proposal.

### ROCKY RIDGE RNC (SR 7 AND 260TH ST. E.)

Within the Rocky Ridge RNC there are existing commercial/industrial uses (realty office, mini-warehouse, manufacturing and mini-mart/gas station) between 260th St. E. and 267th St. E. The current RNC boundaries south of 260th St. E. form a logical outer boundary. The properties to the north of 260th St. E. are currently vacant and fall outside the logical outer boundary and, as of the writing of this plan, there are no vested applications for development proposals on either of these properties.

### JOHNSON'S CORNER RNC (SR 7 AND 304TH ST. E.)

The portion of the Johnson's Corner RNC that falls within the plan area is developed with intensive uses (mini-mart, warehouse, and tavern) that were in existence before July 1, 1990.

### EATONVILLE CUTOFF RNC (SR 7 AND SR 702/352ND ST. E.)

The parcels within the Eatonville Cutoff RNC that are located within the plan area are currently vacant and, as of the writing of this plan, there are no vested applications for development proposals.

#### KAPOWSIN RNC (ORTING-KAPOWSIN HWY AND KAPOWSIN HWY E.)

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The Kapowsin RNC is an example of the classic rural node containing a small grocery store, fire station, grange, post office, and tavern. These uses are tightly clustered at the intersection of Orting-Kapowsin Highway and Kapowsin Highway. All these structures were in existence on or before July 1, 1990 with several dating back to the earlier part of the century. Two parcels contained within the RNC are developed with single-family residences. These parcels are either between existing commercial uses or serve to form a regular boundary.

#### THRIFT RNC (ORTING-KAPOWSIN HWY AND 224TH ST. E.)

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The properties within the Thrift RNC that are located to the north and south of 224th St. E. on the west side of Orting-Kapowsin Highway are developed with more intensive uses (general store, church, mobile home park and warehouse) that were in existence before July 1, 1990. These uses form a logical boundary. The three properties to the east of Orting-Kapowsin Highway are either vacant or single family and property owners and others have verified that these parcels have been used for contractor yard type uses.

### DESCRIPTION OF DESIRED CONDITIONS

One of the most significant issues addressed within the community plan process is land use. How land is utilized within a community directly affects the community's character and quality of life perceived by its residents. Generally speaking, the land uses within the plan area should reflect a rural character and provide a stepped-down scale from the intensity and density of uses found in the more urban neighboring community plan areas of South Hill, Frederickson, and Parkland-Spanaway-Midland. As such, the community has chosen to lower the maximum urban residential densities and commercial intensities. In addition, rural residential densities have also been amended to reflect a larger lot pattern or provide increased protections for or from critical areas. Finally, agriculture is very important to citizens within the plan area and the area designated as farm land has been significantly increased to more accurately reflect current farming and agricultural activities. The following section describes in greater detail the proposed land use designations and zoning classifications as recommended in this plan.

### PROPOSED LAND USE DESIGNATIONS AND ZONING CLASSIFICATIONS

Two new land use designations (Rural Sensitive Resource and Rural Farm) will be applied within the Graham Community Plan area. Five new zoning classifications (Community Employment, Single Family, Moderate High Density Residential, Rural Sensitive Resource, and Rural Farm) and one zoning overlay (Thun Field Airport Overlay) will also be applied to the Graham Community Plan area. Although the community plan proposes to change two land use designations within the area, one of the proposed designations (Rural Sensitive Resource) is already defined and policy direction is included in the County Comprehensive Plan. The Rural Farm designation establishes new policy language in the Comprehensive Plan. The proposed zoning changes outlined in the community plan also create one new zone classification (Rural Farm) within the Pierce County Zoning Code, and otherwise utilize existing zone classifications

applied either Countywide or in other community plans. The following text, tables, and maps illustrate the proposed changes in land use designations, zone classifications, and overlays contained within the community plan and correlating acreage changes for each. (See Map F-1: Land Use Designations, and Map F-19: Proposed Open Space Corridors)

**Table F-9: Overview of Proposed Land Use Designation Changes**

Proposed Land Use Designations	Current Land Use Designation Acreage	Proposed Land Use Designation Acreage	Acreage Change
<b>Urban Designations</b>			
Employment Center (EC)	17.47	17.47	0
Mixed Use District (MUD)	669.37	667.98	-1.39 <sup>(1)</sup>
Moderate Density Single-Family (MSF)	1,283.47	1,284.41	+0.94 <sup>(1)</sup>
<b>Total Urban</b>	<b>1,970.31</b>	<b>1,969.86</b>	<b>-.45<sup>(1)</sup></b>
<b>Rural Designations</b>			
Rural Activity Center (RAC)	440.73	206.04	-234.69
Rural Neighborhood Center (RNC)	83.14	53.36	-29.78
Rural 5 (R5)	3,679.18	3,702.72	+23.54 <sup>(1)</sup>
Rural 10 (R10)	36,268.52	12,385.63	-23,882.89
Rural 20 (R20)	1,438.77	1,185.81	-252.96
Rural Sensitive Resource (RSR)	0.00	22,513.63	+22,513.63
Rural Farm (RF)	0.00	4,206.25	+4,206.25
<b>Total Rural</b>	<b>41,910.34</b>	<b>44,253.44</b>	<b>+2,343.1</b>
<b>Natural Resource Land Designations</b>			
Designated Forest Land (FL)	2,233.16	2,233.71	+0.55 <sup>(1)</sup>
Agricultural Resource Land (ARL)	2,838.21	589.32	-2,248.89
<b>Total Natural Resource</b>	<b>5,071.37</b>	<b>2,823.03</b>	<b>-2,248.34<sup>(1)</sup></b>
<b>Totals</b>	<b>48,952.02</b>	<b>49,046.33</b>	<b>+94.31<sup>(1)</sup></b>

(1) Portion of acreage change is the result of parcel data shifting to centerline of the road.

**Table F-10: Overview of Proposed Zone Classifications Changes**

Zone Classification Types	Current Zone Classifications Acreage	Proposed Zone Classifications Acreage	Acreage Change
<b>Urban Zones</b>			
Employment Center (EC)	17.47	0.00	-17.47
Community Employment (CE)	0.00	17.47	+17.47
Mixed Use District (MUD)	669.37	184.83	-484.54 <sup>(1)</sup>

Zone Classification Types	Current Zone Classifications Acreage	Proposed Zone Classifications Acreage	Acreage Change
Moderate High Density Residential (MHR)	0.00	483.15	+483.15 <sup>(1)</sup>
Moderate Density Single-Family (MSF)	1,283.47	0.00	-1,283.47 <sup>(1)</sup>
Single Family (SF)	0.00	1,284.41	+1,284.41 <sup>(1)</sup>
<b>Total Urban</b>	<b>1,970.31</b>	<b>1,969.86</b>	<b>-.45<sup>(1)</sup></b>
<b>Rural Zones</b>			
Rural Activity Center (RAC)	440.73	206.04	-234.69 <sup>(1)</sup>
Rural Neighborhood Center (RNC)	83.14	53.36	-29.78
Rural 5 (R5)	3,679.18	3,702.72	+23.54 <sup>(1)</sup>
Rural 10 (R10)	36,268.52	12,385.63	23,882.89
Rural 20 (R20)	1,438.77	1,185.81	-252.96
Rural Sensitive Resource (RSR)	0.00	22,513.63	+22,513.63
Rural Farm (RF)	0.00	4,206.25	+4,206.25
<b>Total Rural</b>	<b>41,910.34</b>	<b>44,253.44</b>	<b>+2,343.1<sup>(1)</sup></b>
<b>Natural Resource Land Zones</b>			
Designated Forest Land (FL)	2,233.16	2,233.71	+0.55 <sup>(1)</sup>
Agricultural Resource Land (ARL)	2,838.21	589.32	-2,248.89
<b>Total Natural Resource</b>	<b>5,071.37</b>	<b>2,823.03</b>	<b>-2,248.34<sup>(1)</sup></b>
<b>Totals</b>	<b>48,952.02</b>	<b>49,046.33</b>	<b>+94.31<sup>(1)</sup></b>

(1) Portion of acreage change is the result of parcel data shifting to centerline of the road.

**Table F-11: Overview of Proposed Overlay Changes**

Overlay Types	Current Overlay Acreage	Proposed Overlay Acreage	Acreage Change
Mineral Resource Overlay	365.76	364.30	-1.46 <sup>(1)</sup>
Airport Overlay	0.00	250.53	+250.53
Open Space Corridor Overlay	19,758.70	25,182.05	+5,423.35
Essential Pub. Facility – Solid Waste Facility Overlay	0.00	325.67	+325.67
<b>Totals</b>	<b>20,124.46</b>	<b>26,122.55</b>	<b>+5,998.09<sup>(1)</sup></b>

(1) Portion of acreage change is the result of parcel data shifting to centerline of the road.

**Table F-12: Overview of Proposed Commercial and Industrial Center Changes**

Center Name & Location	Current Acreage	Proposed Acreage	Acreage Change
Elk Plain EC/CE (SR 7 south of 224th St. E.)	17.47	17.47	0.00
Meridian MUD (SR 161 north of 200th St. E.)	565.35	80.81	-484.54 <sup>(1)</sup>
Elk Plain MUD (SR 7 and 224th St. E.)	104.02	104.02	0.00
Graham RAC (SR 161 and 224th St. E.)	370.74	136.05	-234.69
Benston RAC (SR 161 and 304th St. E.)	69.99	70.04	+0.05 <sup>(1)</sup>
Shady Acres RNC <sup>(2)</sup> (208th St. E. and 54th Ave. E.)	6.24	0.00	-6.24
Rocky Ridge RNC (SR 7 and 260th St. E.)	41.33	23.69	-17.64 <sup>(1)</sup>
Johnson's Corner RNC (SR 7 and 304th St. E.)	2.20	2.24	+0.04 <sup>(1)</sup>
Eatonville Cutoff RNC <sup>(2)</sup> (SR 7 and SR 702/352nd St. E.)	5.80	0.00	-5.80
Kapowsin RNC (Orting-Kapowsin Hwy and Kapowsin Hwy E.)	11.22	11.11	-0.11 <sup>(1)</sup>
Thrift RNC (Orting-Kapowsin Hwy and 224th St. E.)	16.35	16.32	-0.03 <sup>(1)</sup>
<b>Total</b>	<b>1,210.71</b>	<b>461.75</b>	<b>-748.96<sup>(1)</sup></b>

(1) Portion of acreage change is the result of parcel data shifting to centerline of the road.

(2) Commercial and/or industrial center deleted.

## URBAN DESIGNATIONS AND ZONES

### EMPLOYMENT CENTER DESIGNATION

The Employment Center (EC) designation provides land for industrial and heavy commercial uses including manufacturing, trucking and warehousing, and auto services. Under the 1994 Pierce County Comprehensive Plan, 17 acres of land within the plan area are designated EC. The community plan proposal would retain the same area as an EC land use designation and rezone this area to Community Employment.

### PROPOSED ZONING – COMMUNITY EMPLOYMENT

The CE zone would be applied to the same 17 acres of current EC zone along Mountain Highway just south of the intersection with 224th St. E. This new zone scales back the range of allowed industrial and commercial uses to low to moderate intensity, which better reflects a rural character. Examples of allowed industrial uses include forest based industries, contractor yards, food processing and packaging, breweries and wineries, salvage yards and vehicle

storage, and industrial services and repair facilities. Commercial uses that are allowed include administrative and professional offices, educational services, indoor and outdoor amusement and recreation, building materials and garden supplies, bulk fuel dealers, business services, eating and drinking establishments, small scale food stores, motor vehicle related sales and services, personal services, pet sales and services, rental and repair services, small scale sales of general merchandise, storage and wholesale trade. Some of the uses are only allowed through the application of a conditional use permit, which will give surrounding property owners the opportunity for review of proposed uses through a public hearing process. Residential uses and lodging will be prohibited in the CE.

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#### MIXED USE DISTRICT DESIGNATION

The primary role of the Mixed Use District (MUD) is to serve auto-oriented commercial activities and a range of moderate to high intensity uses. MUDs are areas with a diversity of commercial retail, service, and office uses and are typically characterized by individual businesses on separate lots with separate access and parking lots. Commercial activity in MUDs caters to a customer base beyond the surrounding neighborhoods or community due to its placement on a roadway used by residents of more than one community. MUDs also offer the opportunity for higher density residential developments. The land area designated MUD remains the same as under the current plan (669 acres).

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#### PROPOSED ZONING – MIXED USE DISTRICT AND MODERATE HIGH DENSITY RESIDENTIAL

The MUD designation will be implemented by two zones: Mixed Use District (MUD) and Moderate High Density Residential (MHR). The MUD zone will continue to offer a variety of auto-oriented, moderate to high intensity uses including commercial, service, light industrial, office, civic, and residential. The MHR zone allows for a variety of higher density residential use types including multifamily, single-family attached, mobile home parks, and senior housing and also some compatible civic uses. Densities within MHR range between a minimum of four dwelling units per acre up to a maximum of 15 dwelling units per acre.

The MUD zone along Mountain Highway at 224th St. E. will be retained within the current boundaries. The existing MUD zone along SR 161 north of 200th St. E. will be separated into MUD and MHR zones. The MHR zone is applied where land is already developed with a higher intensity residential use or is surrounded by residential uses and does not have direct access to SR 161. The new MHR zone is 484 acres. The remaining vacant properties that have access to SR 161 will be retained in MUD zoning. The MUD zone has been reduced to 184 acres.

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#### MODERATE DENSITY SINGLE-FAMILY DESIGNATION

The Moderate Density Single Family (MSF) designation allows for single-family or two-family dwellings. Commercial and industrial uses are prohibited and some limited civic uses are allowed. Specific densities are based on physical constraints and the availability of urban services such as sewers. The designation generally allows two to six dwelling units per acre. The land area to which this designation applies will stay the same as established through the current plan (1,283 acres).



The MSF designation will be implemented by a new Single Family (SF) zone. This zone is intended to provide a transition zone from the higher densities allowed in South Hill to the rural portion of the plan area. The SF still allows for single-family dwellings but at a maximum density of four dwelling units per acre. Some compatible civic uses are also permitted. There are 1,283 acres proposed to be zoned SF.

## RURAL DESIGNATIONS AND ZONES

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### RURAL ACTIVITY CENTER DESIGNATION AND ZONE

The Rural Activity Center (RAC) designation provides for a range of commercial, office, service, and civic uses necessary to serve a rural population. The intensity of development should be smaller scale (i.e., buildings with less square footage) than commercial development allowed within the urban portions of the plan area. The plan proposes to retain the Benston RAC located at SR 161 and 304th St. E. and the Graham RAC at SR 161 and 224th St. E. with some slight modifications, described in greater detail below. The RAC zone implements the RAC designation. The RAC designation and zone is decreased by 234 acres to 206 acres.

### RURAL NEIGHBORHOOD CENTER DESIGNATION AND ZONE

The Rural Neighborhood Center (RNC) designation recognizes several historic commercial and civic centers in the rural area, typically located at cross-roads of main thoroughfares or old town centers. The uses within a RNC should be constrained in intensity and size and limited to only those uses that provide necessary services to rural residents and tourists. The RNC zone implements the RNC designation. The RNC designation and zone is now 53 acres with a reduction of 30 acres from the current plan.

### PROPOSED CHANGES TO THE RURAL ACTIVITY CENTERS AND RURAL NEIGHBORHOOD CENTERS

The rural centers were evaluated using the criteria in the Growth Management Act for limited areas of more intensive rural development (LAMIRDs). This criterion was also balanced with the desire to recognize the current development pattern and historic commercial activities. The following text provides a synopsis of the decisions for each rural center.

**Graham RAC:** The Graham RAC located at 224th St. E. and SR 161 includes many commercial businesses that have been in existence since before July 1, 1990. In the years between 1990 and today the Graham Town Center shopping complex was developed, which includes a range of retail and service uses. The boundaries in the Graham RAC have been adjusted to limit the area of rural commercial zoning based on LAMIRD criteria. The Commercial uses in existence in July of 1990 were identified and establish the logical outer boundary of RAC. As a result, many commercial uses that were legally developed are proposed to be redesignated to R10 and will become nonconforming.

**Benston RAC:** The Benston RAC located at 304th St. E. and SR 161 contains several existing businesses. This RAC should be retained to recognize both existing and historic businesses and provide a location for rural services, given this node's distance from any other rural center.

**Shady Acres RNC:** The Shady Acres RNC located at 208th St. E. and 54th Ave. E. should be removed from RNC classification as the land is currently vacant and other rural centers or urban commercial areas are located in close enough proximity to serve the needs of rural residents in this area.

**Rocky Ridge RNC:** The boundaries of the Rocky Ridge RNC at SR 7 and south of 260th St. E. should be retained to recognize the historic businesses and those that developed during the last 15 years. In addition, the two vacant parcels just north of 268th St. E. should be retained to connect to the existing commercial development across Mountain Highway (located outside the plan area) in order to form a regular boundary. Removal of these parcels would truncate the RNC. However, the two vacant parcels to the north of 260th St. E. fall outside the logical outer boundary and should be redesignated to R10.

**Johnson's Corner RNC:** The Johnson's Corner RNC on the southeast corner of SR 7 and 304th St. E. contains a mini-mart/gas station and tavern and should be retained as RNC to recognize these existing businesses.

**Eatonville Cutoff RNC:** The Eatonville Cutoff RNC at SR 7 and SR 702/352nd St. E. should be removed from the RNC classification and redesignated to R10 as the land is currently vacant.

**Kapowsin RNC:** The Kapowsin RNC clustered at Orting-Kapowsin Highway and Kapowsin Highway E. should be maintained. This RNC contains a mix of rural uses including a tavern, grocery store, fire station, grange, and post office. The other two parcels located within this RNC contain single-family residences but inclusion of these properties in the RNC is necessary to create a logical outer boundary based on infill and the desire to create a regular form.

**Thrift RNC:** The Thrift RNC located at Orting-Kapowsin Highway and 224th St. E. should be retained.

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## RURAL 10 DESIGNATION AND ZONE

The Rural 10 (R10) designation primarily accommodates low-density single-family residential, agricultural, forestry, and recreational uses. Some types of civic uses and recreational uses, such as parks and trails, are also permitted in this designation. The residential density within the R10 is one dwelling unit per 10 acres with a bonus density of two dwelling units per 10 acres when 50% of the property is set aside as open space. Existing parcels that are less than 10 acres and are zoned R10 can be built upon as long as the other criteria such as septic, water, critical areas, and other County requirements are met. The R10 zone implements this plan designation.

The R10 designation and zone has been modified within the plan area to include some of the Rural 20 (R20) properties and exclude lands now designated and zoned RSR, R20, and RF (explained in greater detail below). The R10 decreased by 23,882 acres to 12,385 acres.

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## RURAL 20 DESIGNATION AND ZONE

The Rural 20 (R20) designation is utilized within the volcanic hazard areas of the plan area. This designation provides for very low-density single-family residential, agricultural, and forestry uses and other uses that may accommodate congregations of people or people with special needs have been restricted. Most of the areas that are located within the volcanic hazard area currently fall within designated R20. Areas designated R10 within the volcanic hazard area are redesignated to R20 and areas outside the volcanic hazard area designated R20 are redesignated to R10. The R20 designation increased by 253 acres to 1,186 acres. The R20 zone implements this plan designation.

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## RURAL SENSITIVE RESOURCE DESIGNATION AND ZONE

The Rural Sensitive Resource (RSR) designation includes those properties designated as open space on the Pierce County Open Space Corridor map and is located within 500 feet of sensitive water bodies such as wetlands, Muck Creek, South Creek, Kapowsin Creek, etc. This designation is intended to protect surface waters, aquifers, and fish and wildlife habitat from degradation by more intensive rural residential development and some types of civic uses that may be also be permitted in other rural classifications. New development within the RSR shall utilize low impact development techniques and the properties located within this designation are considered a high priority for community open space preservation and acquisition efforts. Residential densities within this designation are limited to a base density of one dwelling unit per 10 acres. Organizational camps are appropriate in areas designated RSR. There are 22,514 acres within the plan area that have been redesignated to RSR. The RSR zoning classification implements this plan designation.

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## RURAL FARM DESIGNATION AND ZONE

The Rural Farm (RF) designation includes properties that are five acres or more in size, which are currently being used for or have historically been used for farming activities or have been previously zoned agriculture and that are not currently designated as Agricultural Resource Land (ARL). This new RF designation is intended to recognize properties that provide agriculture within the community but may or may not meet the soils criteria for designation as ARL. It should be noted, however, that parcels meeting the criteria for Rural Farm that fall within the volcanic hazard area will be designated R20. A variety of agricultural related uses are allowed within the RF designation as well as the protections and incentives afforded to ARL. Densities within this designation are limited to one dwelling unit per 10 acres. There are 4,206 acres within the plan area that have been redesignated to RF. The RF zoning classification implements this plan designation.

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## NATURAL RESOURCE LAND DESIGNATIONS AND ZONES

### DESIGNATED FOREST LAND DESIGNATION AND FOREST LAND ZONE

The Designated Forest Land (FL) designation is intended to conserve and reflect areas of long-term commercial forestry. Uses that are allowed within this designation include timber

harvesting and related forest resource based industries. Some civic uses, such as fire and police stations, are also allowed in this designation. The FL area is located in the eastern portion of the plan area. The land area to which this designation applies will stay the same as established through the current plan (2,233 acres). The Forest Land zone implements this plan designation.

#### AGRICULTURAL RESOURCE LAND DESIGNATION AND ZONE

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The Agricultural Resource Land (ARL) designation is intended to preserve parcels that contain prime agricultural soils for long-term agricultural activities. These properties are identified through a Countywide process. This designation allows for a variety of agricultural uses. One parcel of land that is currently being utilized for a landfill operation will be removed from the ARL designation. The ARL zone implements this plan designation.

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#### OVERLAYS

##### THUN FIELD AIRPORT OVERLAY

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The Thun Field Airport Overlay will be extended into the plan area based on the Thun Field - Area of Influence map. The same regulations that were adopted through the South Hill Community Plan shall be applied to the Thun Field Airport Overlay area within the Graham Community Plan. There are 250 acres within the plan area to which this airport overlay will be applied.

##### MINERAL RESOURCE OVERLAY

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Pierce County has not yet conducted an evaluation of all the potential mineral resource lands within the County. Until such time as this study has been completed, no new mineral resource overlay areas should be established within the plan area. Surface mining operations should be restricted to sites that already have issued Washington State Department of Natural Resources surface mining permits and County approval for such operations. New surface mining operations are prohibited until the Countywide evaluation of potential mineral resource lands has been conducted. The land area to which this overlay applies will stay the same as is currently established through the Pierce County Comprehensive Plan and/or zoning regulations.

##### ESSENTIAL PUBLIC FACILITY – SOLID WASTE FACILITY OVERLAY

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An Essential Public Facility – Solid Waste Facility Overlay will be applied to the LRI landfill site located at 304th Street East and east of SR 161 as authorized through Conditional Use Permit CP8-89/AE9-95/AE10-95. The regulations should accommodate existing and authorized landfill operations. This overlay encompasses approximately 325 acres.

##### OPEN SPACE CORRIDOR

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The Open Space Corridor Map should be amended to include additional identified areas of wetlands, oak woodlands and prairies, and wildlife habitat and movement corridors. The Open Space Corridor Overlay area has increased by 5,423 acres to 25,182 acres. Environmentally sensitive design techniques should be applied within open space corridors including the use of low impact development techniques as outlined in the Pierce County Site Development and

Stormwater Management Manual. Dedication of permanent open space should be required through the site development or land division process and the amount of open space dedication should be based on the proposed density or intensity of use.

## DWELLING UNIT CAPACITY

Under the Growth Management Act, Pierce County is required to plan for a density of at least four dwelling units per net acre within its urban growth areas. In order to accommodate future population growth within the urban area, the community plan seeks to ensure that the overall housing capacity within the plan area is not diminished as a result of the proposed zone changes. A comparison of the existing and future urban dwelling unit capacity by zone is set forth in Table F-13.

**Table F-13: Comparison of Existing and Future Urban Dwelling Unit Capacity by Zone**

	Current Capacity <sup>(1)</sup>	Future Capacity	Difference
<b>Urban Single-Family Zones</b>			
MSF	1,740	0	-1,740
SF	0	1,740	+1,740
Total	1,740	1,740	0
<b>Urban Multifamily Zones</b>			
MHR	0	778	+778
<b>Urban Mixed Residential/Commercial Zones</b>			
MUD	506	93	- 413
<b>Summary of Urban Zone Capacity</b>			
Overall Plan Area Capacity	2,246 units	2,611 units	+365 units
Population Accommodated <sup>(2)</sup>	6,985	8,120	+1,135

Capacity is calculated using data contained in the Pierce County 2002 Buildable Lands Report. Developable land is calculated on a net basis and excludes roads, environmentally constrained lands, and lands used for civic and other non-residential purposes. Population accommodated is calculated by applying a person per household figure of 3.11 per dwelling unit, derived from the 2000 census information.

As noted above, the community plan increases overall dwelling unit capacity in the community by 365 dwelling units. The increase in the dwelling unit capacity accommodates approximately 1,135 more people. The majority of this population (67%) would be accommodated in the SF zone with single-family homes at four dwelling units per acre. The remaining population would be accommodated at higher allowable densities within the MUD and MHR zones. It should be noted that the buildable lands analysis performed on the 2000 parcel inventory assumed existing golf courses were built-out, and thus did not consider this land acreage for additional capacity. Since that time, an application has been submitted to change the Lipoma Firs Golf Course into a Planned Development District (PDD) that proposes 1,073 single-family dwelling units and 624 multifamily dwelling units for a total of 1,697 additional dwelling units. Applying the 3.11 persons per dwelling unit this development would accommodate an additional 5,278 people for housing capacity within the plan area's UGA.

## COMMUNITY CENTERS

Community centers (Mixed Use Districts, Rural Activity Center, and Rural Neighborhood Centers) are the focal points for commerce and social activities within the plan area and as such should provide a variety of business and daily services and public facilities. More intensive uses should be located in the urban areas and development in the rural centers should be smaller in scale and reflect a rural character. The existing combination of uses within the community centers is good but could be further diversified. When possible each community center should provide a mix between public facilities such as parks and recreation facilities, libraries, post offices, and fire stations, and commercial businesses such as retail shops and professional services. Co-location opportunities to provide a number of community centers should be explored and the development of farmers markets is highly encouraged.

## LAND USE POLICIES

### GOALS

The distribution and types of land uses in the plan area should reinforce the rural character of the area:

- Within commercial designations, concentrate commercial uses with higher intensity in the urban areas and lower intensity in rural areas.
- Identify the area at 224th St. E. and SR 161 as a primary commercial area, with commercial uses extending in all directions from the core, rather than in a strip pattern, and encourage new commercial development to occur first at the center of the core to maintain a rural character.
- Concentrate new residential development within the urban growth area to improve efficiency in providing public services, and limit multifamily development to specified locations in the UGA.
- Establish rural densities that are consistent with the rural character.
- Provide increased protection to sensitive natural resources through the use of a sensitive resource land use designation in areas subject to severe degradation when disturbed.

In the Urban Growth Area, allow for higher intensity uses that depend on urban level services while blending with Graham's rural character.

## AGRICULTURE AND AQUACULTURE

- GOAL GR LU-1** Promote agriculture activities throughout the rural portions of the plan area.
- GR LU-1.1** Parcels included in the Rural Farm should be a minimum of 5 acres in size.
- GR LU-1.2** Parcels that are located within a Rural Center or volcanic hazard area; within the Rural 5, Agricultural Resource Land, or Forest Land designation; or within a Mineral Resource Overlay should not be designated Rural Farm.

- GR LU-1.3 New parcels created within the Rural Farm should be a minimum of 10 acres in size.
- GOAL GR LU-2 Locate agricultural supply and product sales uses in designations/zones that are appropriate for the level, type, and intensity of the proposed use.
  - GR LU-2.1 Limit agricultural supply sales of large scale or heavy equipment products, such as combines and tractors, to urban commercial and industrial areas.
  - GR LU-2.2 Outside storage and display of products should be controlled and when necessary fenced to provide adequate screening.
  - GR LU-2.3 Structures in Rural Activity Center zones should be of a scale not exceeding the rural center character.
  - GR LU-2.4 Structures in Rural Neighborhood Center and Rural 10 zones should be very small scale.
- GOAL GR LU-3 Some smaller scale agricultural sales involving agricultural products such as produce, dairy products, flowers, etc., that are limited in size and products may be permitted in rural residential and agricultural areas.
  - GR LU-3.1 The intensity and design of structures that are used to sell produce and plants should be in an open air farmers' market format or incorporated into a barn-like structure that maintains a rural character.
  - GR LU-3.2 Structures for produce and plant sales should be small in size, and outside storage and sales should be limited in scope and, when necessary, properly screened.
  - GR LU-3.3 Agricultural products should be grown or produced on-site or produced locally, but some small amount of other accessory retail sales may occur (e.g., value added products, products sold on consignment, handcrafted items, related wholesale sales).
- GOAL GR LU-4 Apply a special review process to fish processing, hatcheries, and aquaculture uses in sensitive areas.
- GOAL GR LU-5 Allow animal boarding for personal use.
  - GR LU-5.1 The number of animals should be based on the amount of land available to support the species.

## FORESTRY

- GOAL GR LU-6 Recognize forestry uses as a historic land use within the plan area and a desirable use to promote the rural character.
  - GR LU-6.1 Conduct commercial harvesting of forest products in rural residential and natural resource land areas.



- GR LU-6.2 Retain the rural character by allowing Christmas tree farms in urban single-family, rural residential, and natural resource land areas.
  - GR LU-6.2.1 Limit the size of Christmas tree farms to no greater than 5 acres in SF.
- GR LU-6.3 Locate forestry uses that involve the manufacturing of lumber and basic wood materials, etc. in Community Employment (CE) zones and through special review in Forest Land zones.
- GR LU-6.4 Recognize historically authorized forestry-based industries such as Rainier Veneer and Viking Cabinets that were legally created and are now nonconforming uses, and allow these uses to remain and continue operations in a nonconforming status.

## INDUSTRIAL

- GOAL GR LU-7 Accommodate low intensity industrial uses within the plan area in locations where the mixture of uses can be internally compatible as well as adequately separated from surrounding non-industrial uses.
  - GR LU-7.1 Access these uses from a state highway or, when appropriate, a railroad line or airport.
  - GR LU-7.2 Uses should be of a type and scale that is consistent with a rural character.
  - GR LU-7.3 Prohibit residential uses within CE.
  - GR LU-7.4 Limit basic manufacturing uses to forest-based industries, which are classified under the Resource Use – Forestry category, within the plan area. Prohibit all other basic manufacturing uses within the plan area, as they exceed an intensity level that is desirable for the rural character.
  - GR LU-7.5 Locate contractor yards in urban commercial and industrial designations and in the Rural 10 land use designation.
    - GR LU-7.5.1 Adopt design and zoning standards and guidelines for contractor yards that address adequate screening and buffering requirements to enhance the aesthetic appeal of these uses.
  - GR LU-7.6 Allow small-scale food processing and packaging facilities in urban commercial and industrial zones, and in Rural Activity Center zone subject to special review. Allow small-scale breweries (micro-brews and brew pubs) and wineries as an accessory use for a restaurant.
  - GR LU-7.7 Provide for industrial services and repair facilities in urban commercial and industrial designations.

## COMMERCIAL

- GOAL GR LU-8** Commercial uses should provide a range of necessary businesses to the surrounding community. Concentrate commercial uses in urban centers (CE and Mixed Use District) and rural centers (Rural Activity Center and Rural Neighborhood Center) with recreational opportunities allowed in rural residential and forest areas.
- GR LU-8.1** Provide adequate space within the plan area for commercial uses, and locate commercial uses primarily within urban centers or rural centers at a scale that is compatible with the surrounding uses.
- GR LU-8.2** Designate and configure commercial areas based on consideration of the percentage of vacant and redevelopable land, existing developed uses, constrained land, distance to other urban or commercial areas, compatibility with surrounding uses, and projected population growth. In addition, apply GMA criteria for limited areas of more intensive rural development (LAMIRD) in evaluating rural centers and adjust rural center boundaries as follows:
- GR LU-8.2.1** The Elk Plain Mixed Use District (east of SR 7 and 224th St. E.) shall remain as it currently exists.
- GR LU-8.2.2** Modify the Meridian Mixed Use District (SR 161 north of 200th St. E.) to redesignate the properties that are either currently developed with residential uses or are not adjacent to Meridian to Moderate-High Density Residential (MHR).
- GR LU-8.2.3** Modify the Graham Rural Activity Center (RAC) located at 224th St. E. and SR 161 to remove Frontier Park, properties owned by the school district, and the residential subdivision located in the northeast portion of the RAC. These parcels shall be redesignated to Rural 10. Additionally, modify this RAC to remove properties that are outside the logical outer boundaries of the rural commercial area based on those commercial uses that were established as of July 1990.
- GR LU-8.2.4** Redesignate the Rural Neighborhood Center located at 208th St. E. and 54th Avenue E. to Rural 10.
- GR LU-8.2.5** Revise the Rural Neighborhood Center located at SR 7 and 260th St. E. to remove the two vacant parcels north of 260th St. E. Redesignate these two parcels to Rural 10.
- GR LU-8.2.6** Redesignate the Rural Neighborhood Center located at SR 7 and SR 702/352nd St. E. to Rural 10.
- GR LU-8.2.7** Retain the Benston RAC (SR 161 and 304th St. E.) and the remaining Rural Neighborhood Centers at Johnson’s Corner (SR 7 and 304th St. E.) and Kapowsin (Orting-Kapowsin Hwy. and Kapowsin Hwy E.) in their current locations if they meet the LAMIRD criteria.

## RESIDENTIAL

- GOAL GR LU-9** Residential areas should provide a range of uses from urban levels of density to lower rural residential densities.
- GR LU-9.1** The scale of density should provide a step-down transition from the higher densities in the South Hill Community Plan area and reflect a rural feel.
  - GR LU-9.2** Residential density within the SF zone shall be 4 dwelling units per acre.
  - GR LU-9.3** Apply a lower rural residential density in volcanic hazard areas and environmentally sensitive areas.
  - GR LU-9.4** Apply a Rural Sensitive Resource (RSR) designation to open space corridors within rural residential designations to reduce impacts associated with development.
    - GR LU-9.4.1** Establish a RSR zone on rural residential properties located within the open space corridor that contain at least 50% of designated open space corridor area.
    - GR LU-9.4.2** At a minimum, the RSR zone should extend 500 feet in all directions from any wetland, stream, or surface water utilized for open space corridor designation.
    - GR LU-9.4.3** Delineate the RSR zone using parcel boundaries.
    - GR LU-9.4.4** Exclude small lots that are located within previously platted lands from the RSR unless they are contained within the main portion of the open space corridor (i.e., connectivity should be maintained).
    - GR LU-9.4.5** Monitor and adjust, as needed over time, those lands given the RSR zoning designation. Lands may be added or removed from this zoning designation as information regarding the environmental carrying capacity of the land and the sensitivity of the environment changes over time.
  - GR LU-9.5** Low density single-family housing shall be allowed to occur in RSR zones.
    - GR LU-9.5.1** Limit the base residential density to 1 dwelling unit per 10 acres.
    - GR LU-9.5.2** Provide bonus densities within RSR at 2 dwelling units per 10 acres when 50% of the property is set aside as permanent open space.
    - GR LU-9.5.3** Ten-acre lot sizes are preferred.
  - GR LU-9.6** Limit land uses within the Rural Sensitive Resource designation to low density residential uses and natural resource uses, and consider uses that minimize impacts in the RSR zone.
    - GR LU-9.6.1** Limit land uses within the RSR designation to single-family residential, agriculture, forestry, selected civic uses such as organizational camps, and public nonmotorized recreational facilities. Prohibit commercial and industrial development.

- GR LU-9.6.2 Require a special review process to elicit greater public involvement in the issuance of permits for certain land uses within RSR. Prohibit uses that may have potential impacts to the surrounding environmental systems within RSR.
- GR LU-9.6.3 Encourage uses that create minimum impacts to the integrity of the open space corridor such as pervious trails.
- GR LU-9.6.4 Encourage uses that do not involve significant buildings or impervious surfaces such as farming and forestry.
- GOAL GR LU-10 Provide incentives to consolidate parcels to be consistent with rural densities.
  - GR LU-10.1 Investigate streamlining the lot combination and lot boundary line adjustment application processes.
- GOAL GR LU-11 Utilize the Rural 20 (R20) designation to provide for lower residential densities and intensities of uses within volcanic hazard areas.
  - GR LU-11.1 Prohibit Master Planned Resorts within R20.

## CIVIC USES

- GOAL GR LU-12 Promote necessary civic uses within the plan area that are compatible with the designated and surrounding uses and natural environment.
  - GR LU-12.1 Allow administrative government services in urban commercial and industrial designations and Rural Activity Centers.
  - GR LU-12.2 Provide for daycare centers in close proximity to residential areas at an appropriate scale for the surrounding area while protecting children from incompatible uses and volcanic hazard areas.
  - GR LU-12.3 Locate community and cultural services in commercial centers and districts, organizational camps in Rural Sensitive Resource areas, and small-scale services in residential areas.
  - GR LU-12.4 Provide for educational facilities in close proximity to residential areas at an appropriate scale for the surrounding area while protecting children from incompatible uses and volcanic hazard areas.

## ZONING OVERLAYS

### OPEN SPACE CORRIDOR OVERLAY

- GOAL GR LU-13 Develop special overlay standards to protect the environmentally sensitive areas or other special interest areas from incompatible uses.
  - GR LU-13.1 Include environmentally sensitive features on the open space map, and promote protection measures within these open space corridors.

- GR LU-13.2 Apply environmentally sensitive design techniques within open space corridors and RSR zone.
  - GR LU-13.2.1 Apply low impact development standards as outlined in the Pierce County Site Development and Stormwater Management Manual within open space corridors and RSR zone to address best management practices such as site development (clearing, grading, and tree removal), maximum impervious surface coverage, and minimum vegetation retention.
- GR LU-13.3 Require open space in new residential development.
- GR LU-13.4 Limit allowable uses within open space areas to minimize impacts and enhance passive recreational experiences. Allow the following uses within designated open space areas in this priority:
  - GR LU-13.4.1 Preservation of natural vegetation, including fish and wildlife habitat;
  - GR LU-13.4.2 Critical areas protection, including steep slopes and aquifer recharge areas;
  - GR LU-13.4.3 Buffers between incompatible land uses;
  - GR LU-13.4.4 Passive recreation (pervious and impervious trails);
  - GR LU-13.4.5 Active recreation;
  - GR LU-13.4.6 On-site utilities (drainfields, stormwater retention facilities); and
  - GR LU-13.4.7 Pedestrian, equestrian, and bicycle trails.
- GR LU-13.5 Reduce the amount of density or intensity allowed within a proposed development that lacks permanently designated usable open space.
- GR LU-13.6 Permit pedestrian, equestrian and bicycle trails within designated open space tracts.
- GR LU-13.7 Utilize the Comprehensive Plan Open Space Corridors Map as the basis for establishing open space overlay corridors within the plan area.
- GR LU-13.8 Use open space corridors to connect wetlands and areas with hydric soils that recharge streams and groundwater.

## IMPLEMENTING ACTIONS

The following list of actions needs to be completed in order to implement the policies contained within this plan. They are arranged according to the timeframe within which each should be completed: short, medium, or long term. Short-term actions should occur within one year of plan adoption. Mid-term actions should be completed within 2-5 years. Long-term actions should be completed within 5-10 years of plan adoption. The entity or entities responsible for leading the effort to complete the action item is listed in parenthesis following the action. Actions are assigned to the Land Use Advisory Commission (LUAC), Pierce County Planning and Land Services (PALS), Pierce County Economic Development (ED), Pierce County

Parks and Recreations (Parks), Pierce County Public Works & Utilities (PWU), and Tacoma-Pierce County Health Department (TPCHD).

### SHORT TERM ACTIONS (UPON PLAN ADOPTION TO 1 YEAR)

1. Amend the Pierce County Comprehensive Plan to adjust land use designations according to plan policies and maps. (PALS)
2. Amend the Pierce County Comprehensive Plan to:
  - Revise the open space corridor map for the Graham Community Plan area.
  - Establish a Rural Farm designation.
  - Revise land use designations per the adopted community plan. (PALS)
3. Amend the Pierce County Development Regulations – Zoning to:
  - Establish the allowed uses in zone classifications per the plan policies.
  - Establish densities and dimensions for the zone classifications.
  - Amend the zone classifications to include Graham Community Plan zones.
  - Amend the agricultural supply sales use category to create new levels.
  - Amend other community plan zone classification tables to reconcile the new agricultural supply sales levels. (PALS)
4. Amend the Pierce County Zoning Atlas to adjust the zones for the Graham Community Plan area and extend the Airport Overlay for Thun Field to the Graham Community Plan area. (PALS)
5. Amend the Pierce County Development Regulations – Natural Resource Lands to clarify that agricultural lands include both Agricultural Resource Land and Rural Farm designations. (PALS)
6. Amend the Pierce County Development Regulations – Design Standards and Guidelines to provide open space dedication requirements. (PALS)

### MID-TERM ACTIONS (1-5 YEARS)

1. Work with the Pierce County Assessor-Treasurer's Office to reconcile property taxation with existing zoning and allowed uses pursuant to what is allowed in the zone. (PALS, Assessor-Treasurer's office)
2. Amend the Pierce County Comprehensive Plan to address General Aviation Airport issues for the Shady Acres Airport. (PALS)

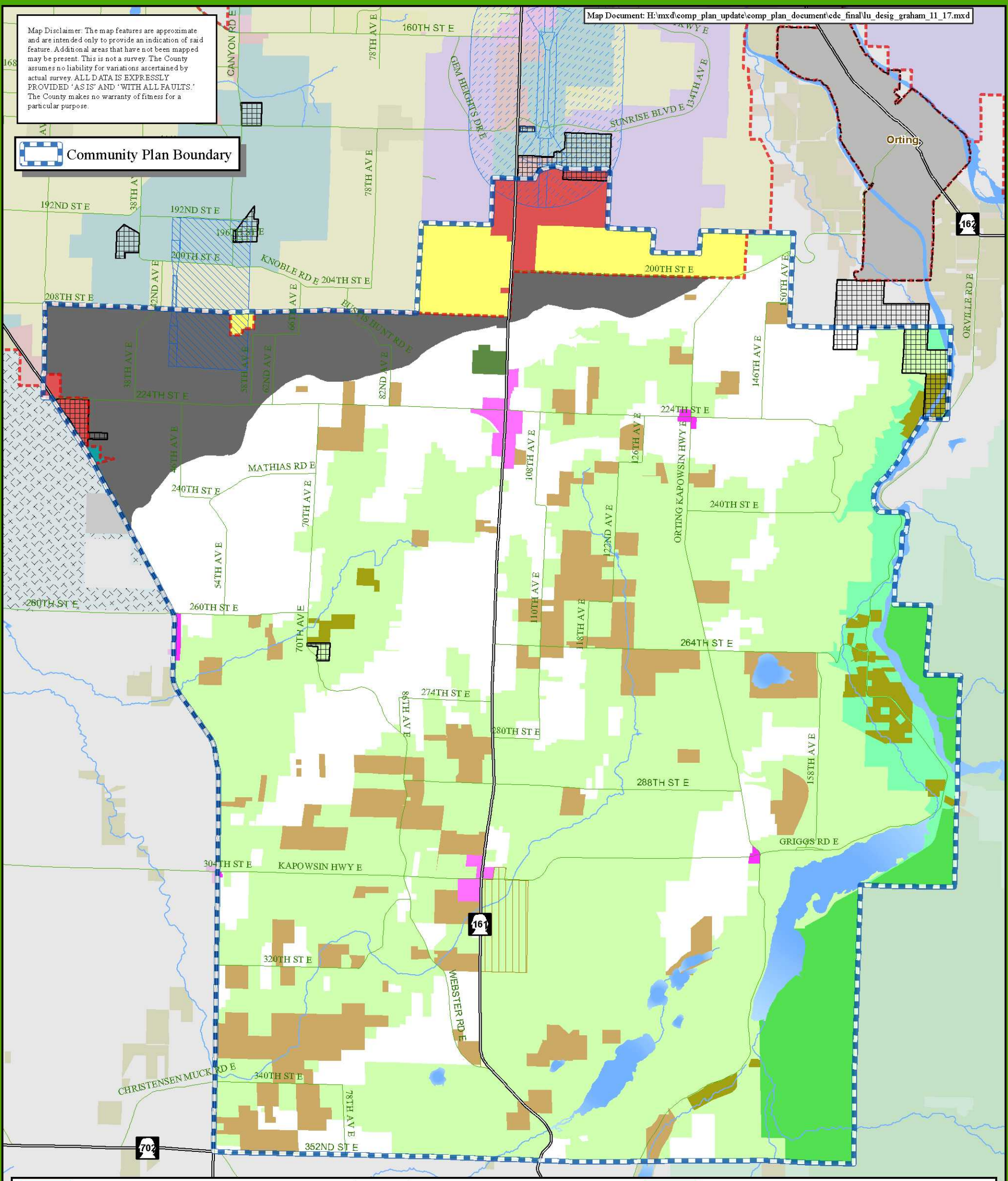
### LONG TERM ACTIONS (5-10 YEARS)








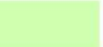







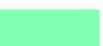
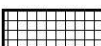
1. Map potential mineral resource lands within the community plan area and develop Mineral Resource Overlay (MRO) standards. (PALS)









Map Disclaimer: The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'AS IS' AND 'WITH ALL FAULTS.' The County makes no warranty of fitness for a particular purpose.

 Community Plan Boundary



	Employment Center (EC)		Rural 10 (R10)		Designated Forest Land (FL)
	Mixed Use District (MUD)		Rural 5 (R5)		Agricultural Resource Land (ARL)
	Moderate Density Single Family (MSF)		Rural Sensitive Resource (RSR)		Airport/Airport AOI Overlay
	Rural Activity Center (RAC)		Park & Recreation (PR)		Airport Overlay - Small Airport
	Rural Neighborhood Center (RNC)		Rural Farm (RF)		Ess. Pub. Fac. - Solid Waste Facility Overlay
			Rural 20 (R20)		Mineral Resource Overlay

\*Note: The legend shows only the land use designations within the Graham Community Plan Area. The areas outside this plan area are masked within the map display.

	County Boundary
	Urban Growth Boundaries
	Municipal Area
	Nisqually NWR
	Mount Rainier NP
	Military Land

# Map F-1: Land Use Designations



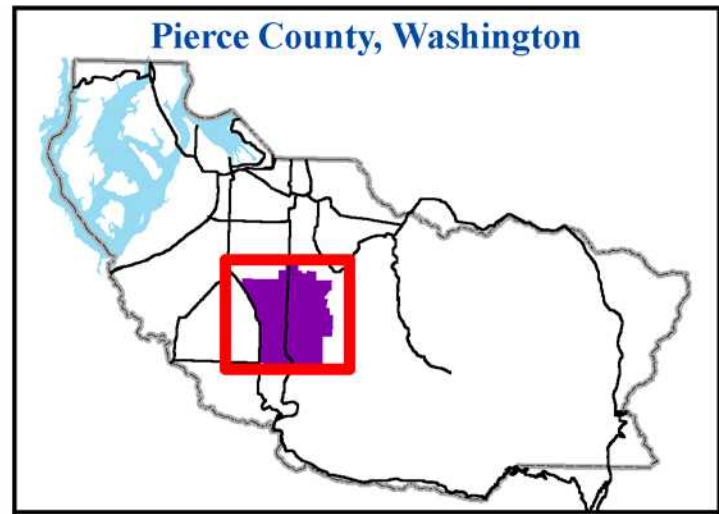
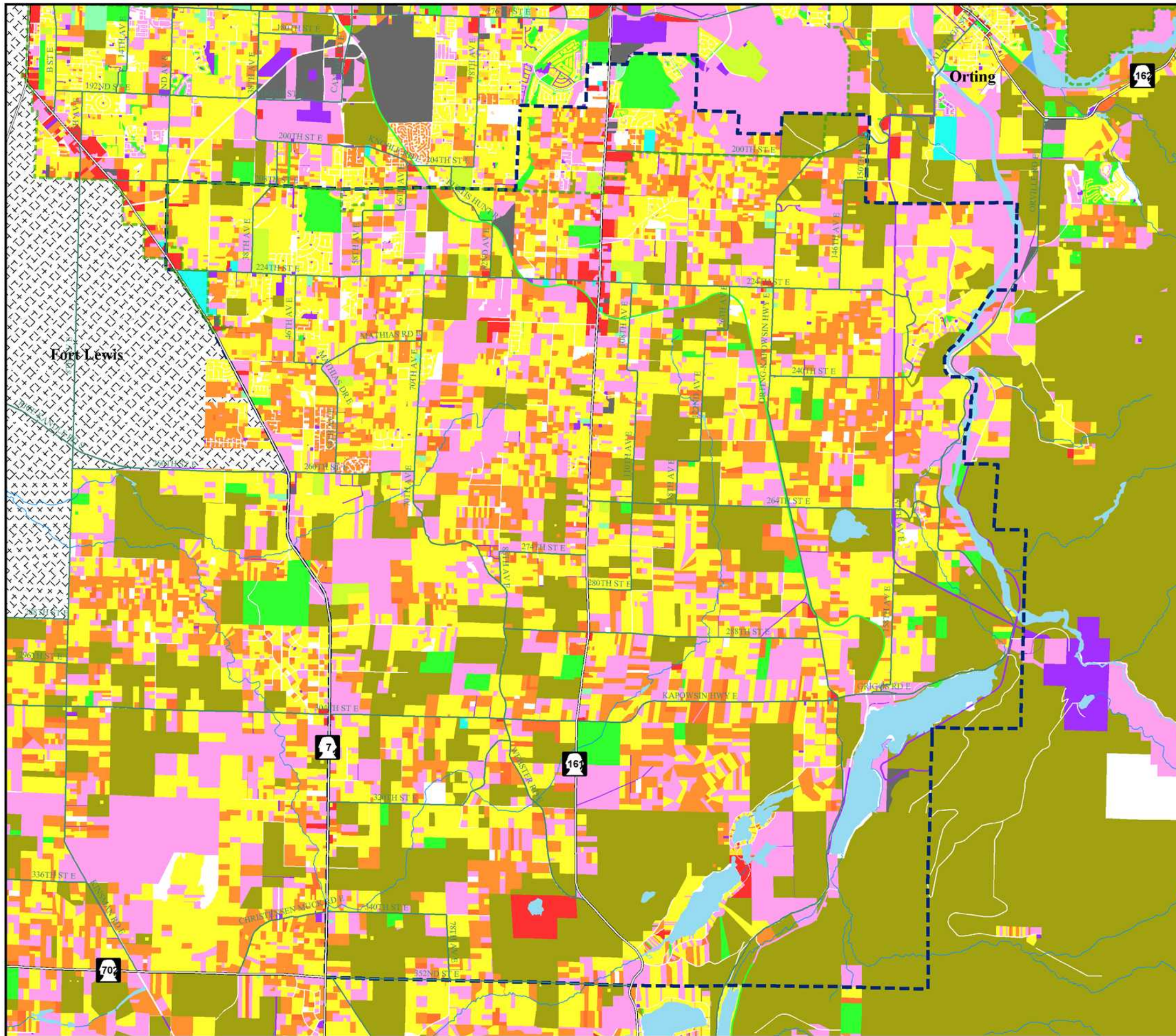
Graham Community Plan



Revision Date: 6/24/2015  
Plot Date: 6/25/2015





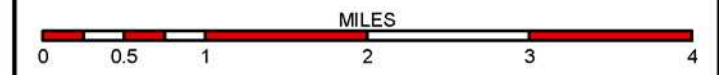


### Historic Assessed Land Uses

- Single-Family Residential
- Multi-Family Residential
- Group Quarters/Other
- Mobile Home
- Residential Outbuildings
- Commercial/Service
- Education
- Quasi-Public Facilities
- Public Facilities
- Industrial
- Transportation/Communication/Utilities
- Open Space/Recreation
- Resource Land
- Vacant
- Water Bodies
- Unknown

Source: Pierce County Assessor/Treasurer Land Use Code Information  
Tax Parcel Dataset Dated: November 1, 2006

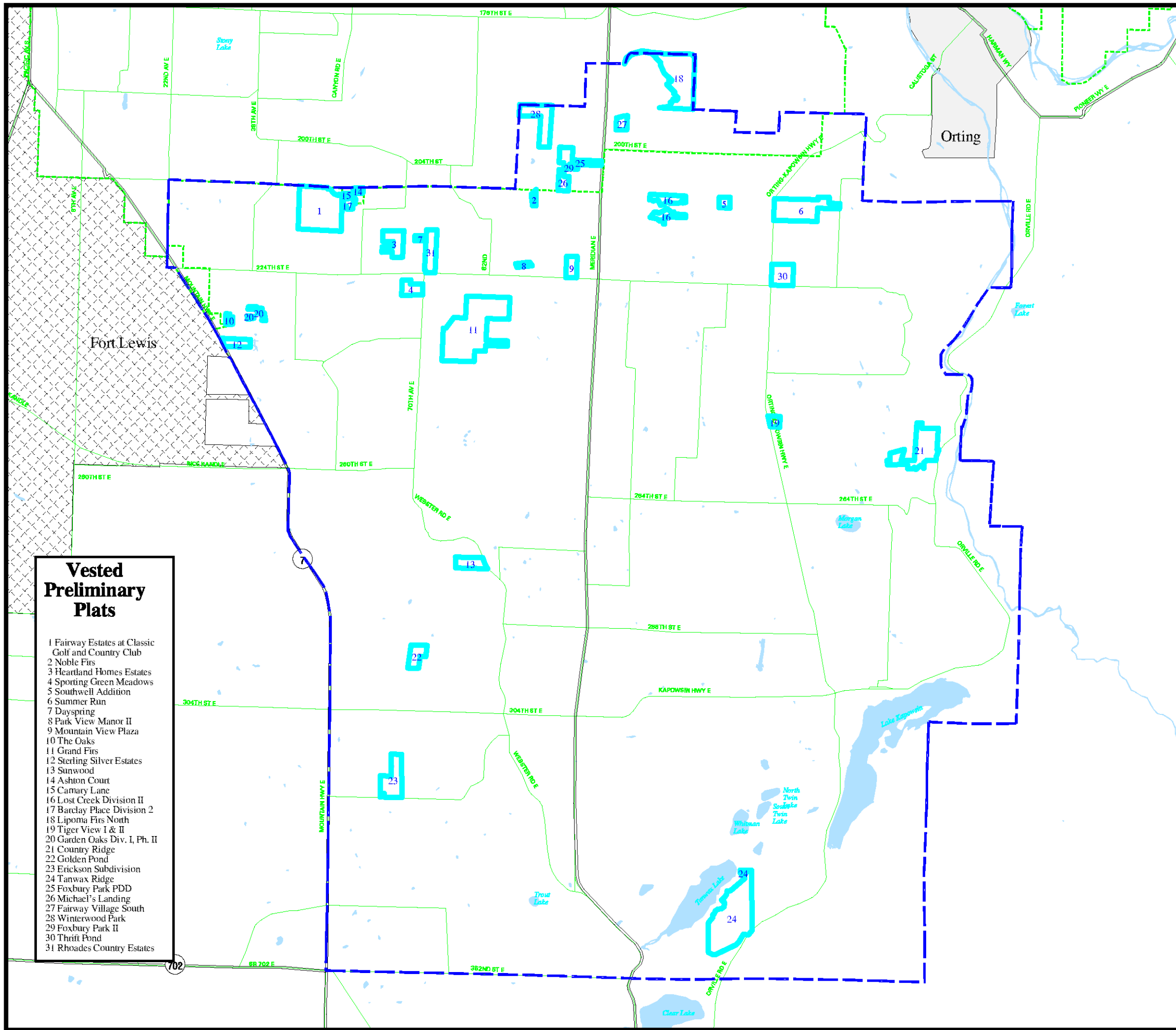
- Comp. Urban Growth Area Bnd.
- Graham Comm. Plan Boundary



Department of Planning and Land Services  
Plot Date: February 7, 2007

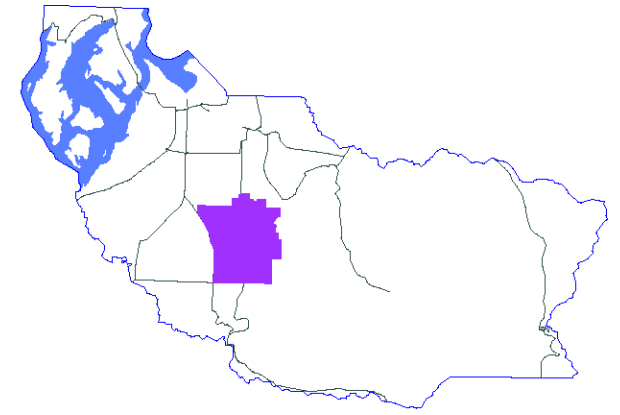
# Graham Community Plan





- Vested Preliminary Plats**
- 1 Fairway Estates at Classic Golf and Country Club
  - 2 Noble Firs
  - 3 Heartland Homes Estates
  - 4 Sporting Green Meadows
  - 5 Southwell Addition
  - 6 Summer Run
  - 7 Dayspring
  - 8 Park View Manor II
  - 9 Mountain View Plaza
  - 10 The Oaks
  - 11 Grand Firs
  - 12 Sterling Silver Estates
  - 13 Sunwood
  - 14 Ashton Court
  - 15 Camary Lane
  - 16 Lost Creek Division II
  - 17 Barclay Place Division 2
  - 18 Lipoma Firs North
  - 19 Tiger View I & II
  - 20 Garden Oaks Div. I, Ph. II
  - 21 Country Ridge
  - 22 Golden Pond
  - 23 Erickson Subdivision
  - 24 Tanwax Ridge
  - 25 Foxbury Park PDD
  - 26 Michael's Landing
  - 27 Fairway Village South
  - 28 Winterwood Park
  - 29 Foxbury Park II
  - 30 Thrift Pond
  - 31 Rhoades Country Estates

**Pierce County, Washington**



**Vested Preliminary Plats**

Preliminary Plat Boundary

Comp. Urban Growth Area Boundary

Graham Community Plan Boundary

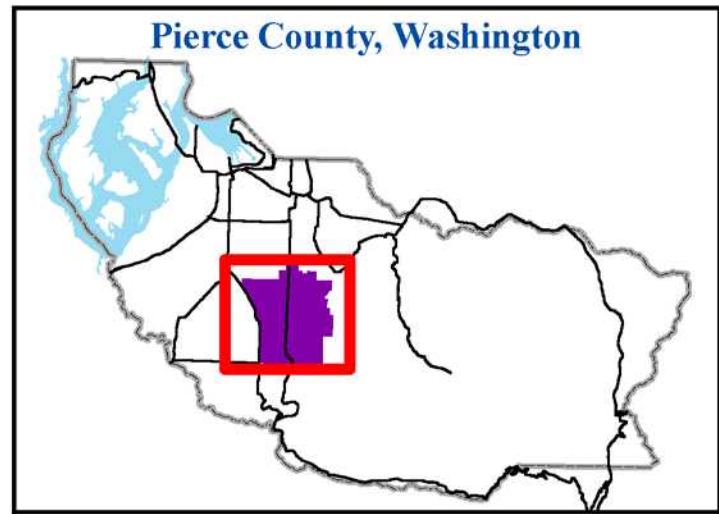
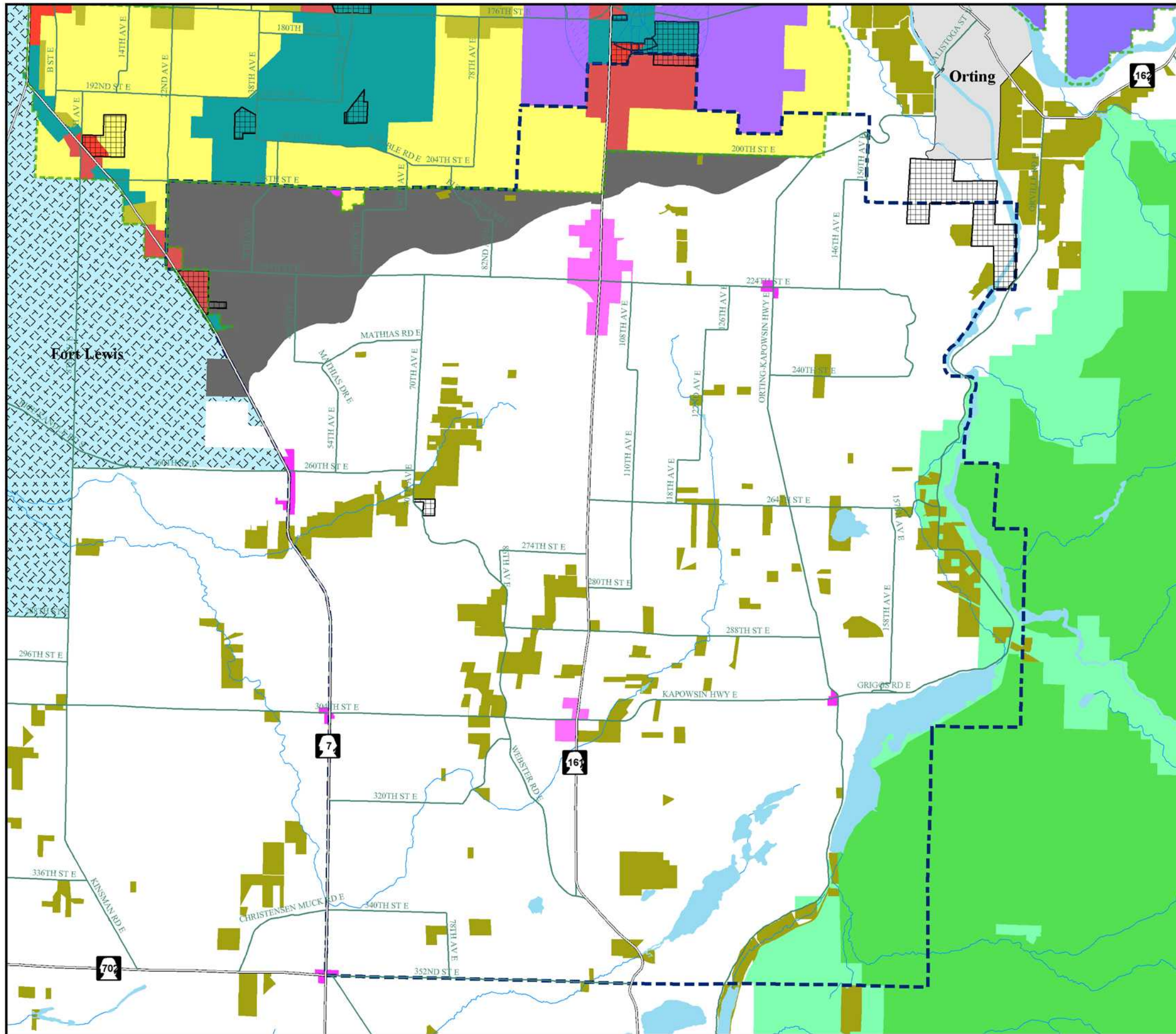


Department of Planning and Land Services

Plot Date: February 07, 2006

**Graham Community Plan**



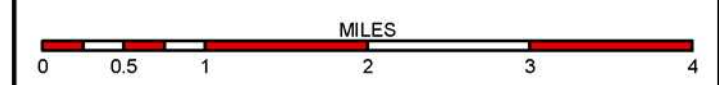


### Historic Land Use Designations

- Employment Center (EC)
- Community Centers (CC)
- Mixed Use Districts (MUD)
- High Density Residential (HRD)
- Moderate Density Single-Family (MSF)
- Master Planned Communities (MPC)
- Emp. Based Planned Communities (EBPC)
- Rural Military Land (RML)
- Rural Activity Center (RAC)
- Rural Neighborhood Center (RNC)
- Rural 10 (R10)
- Reserve 5 (Rsv5)
- Rural 20 (R20)
- Designated Forest Land (FL)
- Agricultural Resource Land (ARL)
- Airport AOI Overlay (AO)
- Mineral Resource Overlay (MRO)

Adopted 12/6/05 - Ord. #2005-94s2, Effective 3/1/06

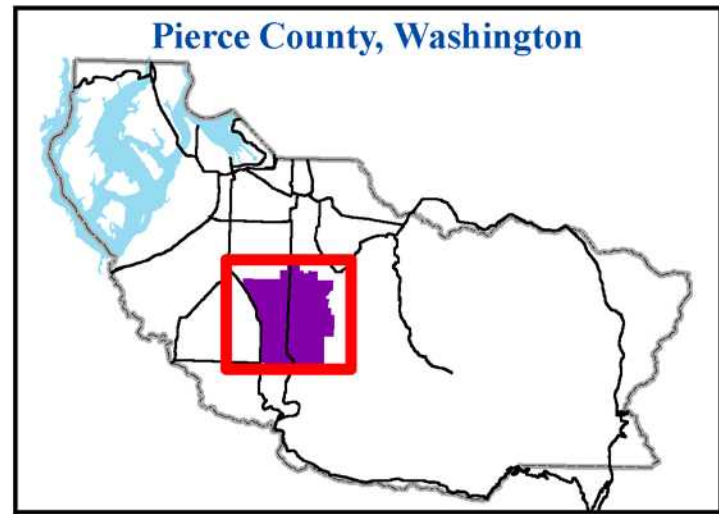
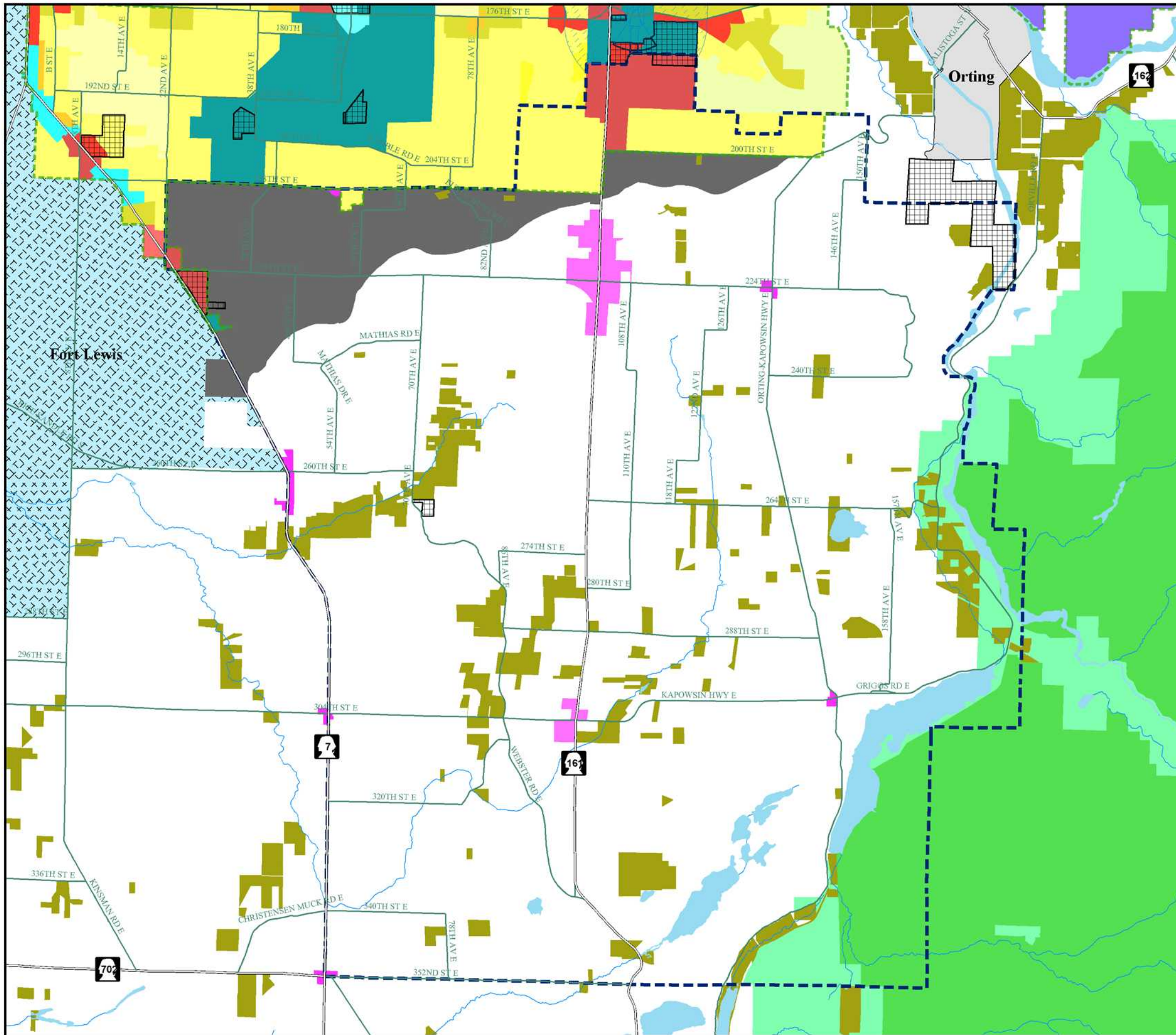
- Comp. Urban Growth Area Bnd.
- Graham Comm. Plan Boundary



Department of Planning and Land Services  
 Plot Date: February 7, 2007

# Graham Community Plan



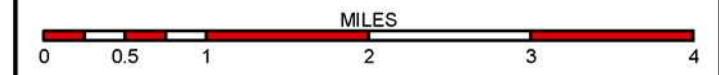


## Historic Zoning

- Employment Center (EC)
- Community Employment (CE)
- Employment Services (ES)
- Community Centers (CC)
- Mixed Use Districts (MUD)
- Commercial Mixed Use Districts (CMUD)
- Residential/Office-Civic (ROC)
- Moderate-High Density Residential (MHR)
- High Density Single-Family (HSF)
- Moderate Density Single-Family (MSF)
- Single-Family (SF)
- Residential Resource (RR)
- Emp. Based Planned Communities (EBPC)
- Rural Military Land (RML)
- Rural Activity Center (RAC)
- Rural Neighborhood Center (RNC)
- Rural 10 (R10)
- Reserve 5 (Rsv5)
- Rural 20 (R20)
- Designated Forest Land (FL)
- Agricultural Resource Land (ARL)
- Airport AOI Overlay (AO)
- Mineral Resource Overlay (MRO)

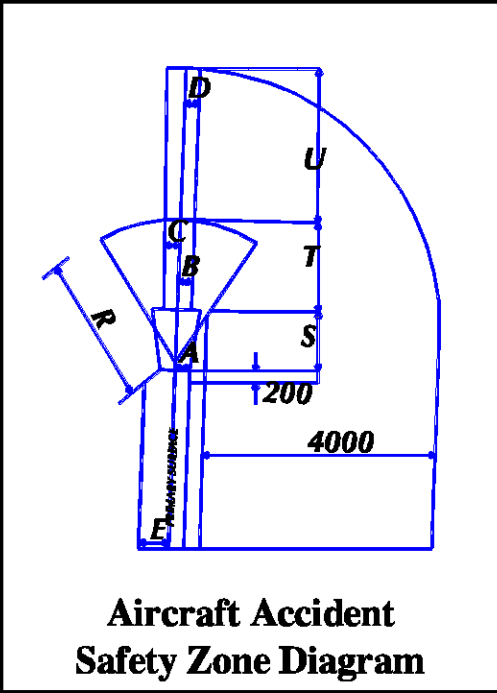
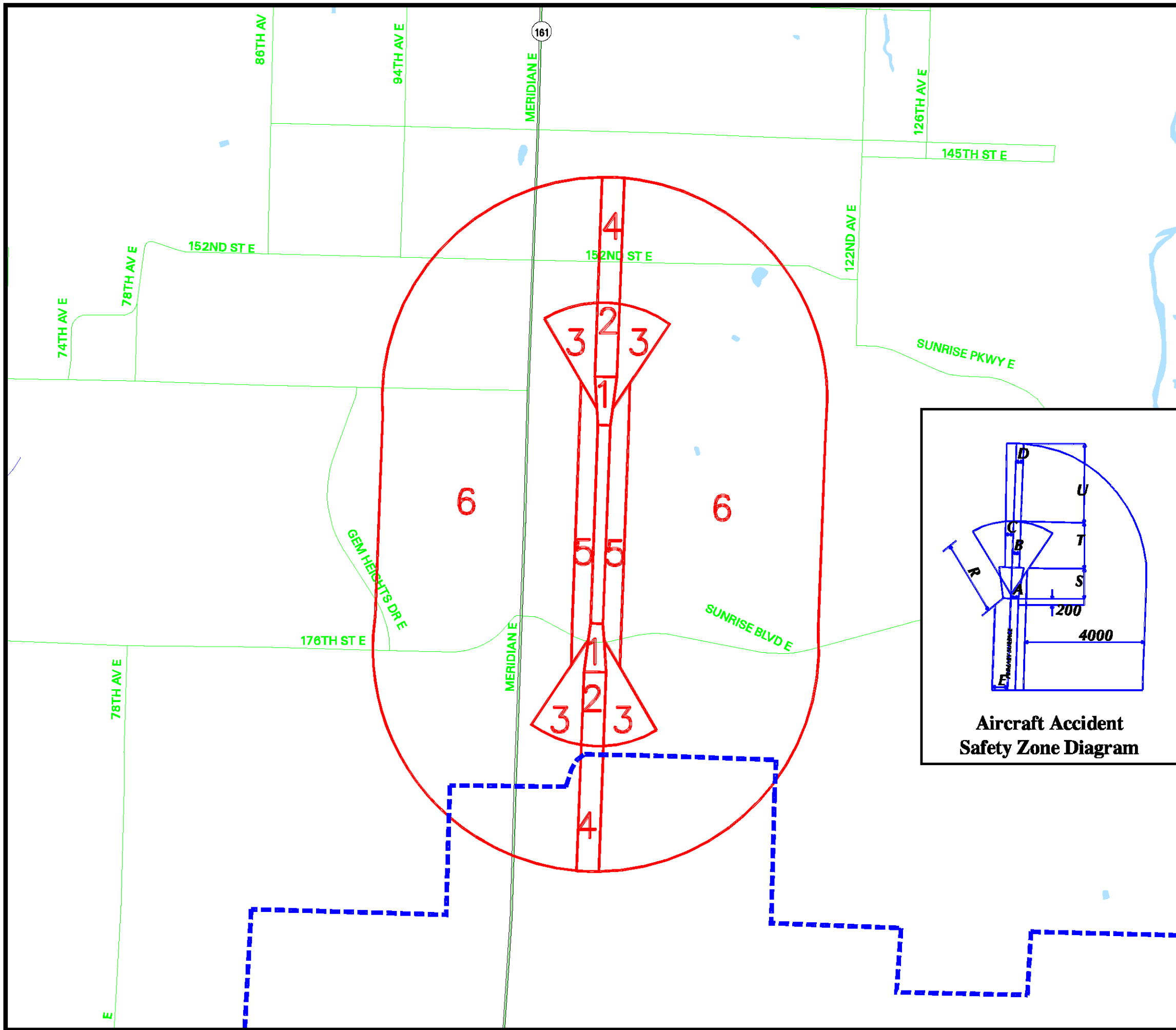
Adopted 12/6/05 - Ord. #2005-94s2, Effective 3/1/06

- - - Comp. Urban Growth Area Bnd.
- - - Graham Comm. Plan Boundary

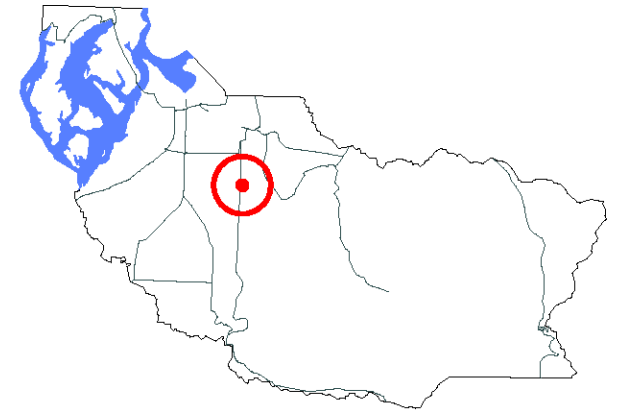


Department of Planning and Land Services  
 Plot Date: February 7, 2007

# Graham Community Plan



**Pierce County, Washington**



**Pierce County Airport  
Thun Field Area Of Influence**

**Aircraft Accident Safety  
Zone Diagram**

- 1 Runway Protection Zone
- 2 Inner Safety Zone
- 3 Inner Turning Zone (60 Degree Sector)
- 4 Outer Safety Zone
- 5 Sideline Safety Zone
- 6 Traffic Pattern Zone

Dimension	Runway Less Than 4,000 Feet
A	125
B	225
C	225
D	225
E	500
F	4,000
R	2,500
S	1,000
T	1,500
U	2,500

--- Graham Community Plan Boundary

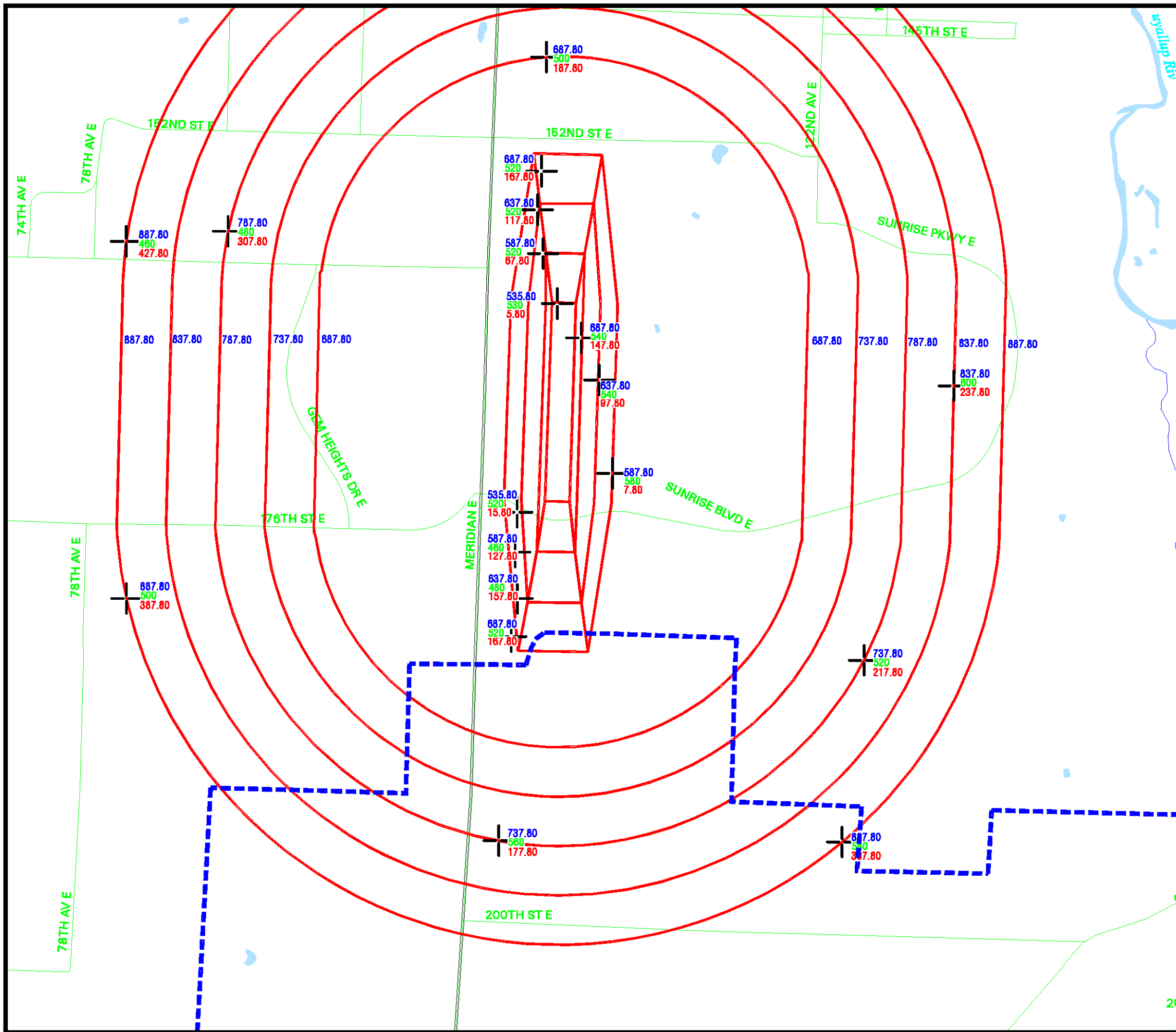


Department of Planning and Land Services

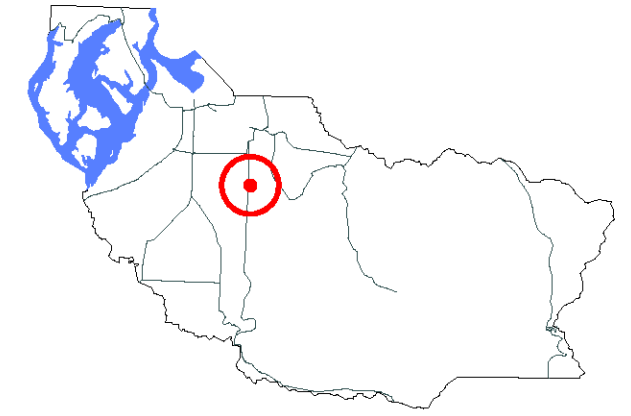
Plot Date: January 20, 2006

**Graham  
Community Plan**





**Pierce County, Washington**



**Pierce County Airport  
(Thun Field)**

**Generalized Object Height**

- 123 Maximum Horizontal Surface Elevation
- 123 Site Elevation
- 123 Maximum Object Height

--- Graham Community Plan Boundary

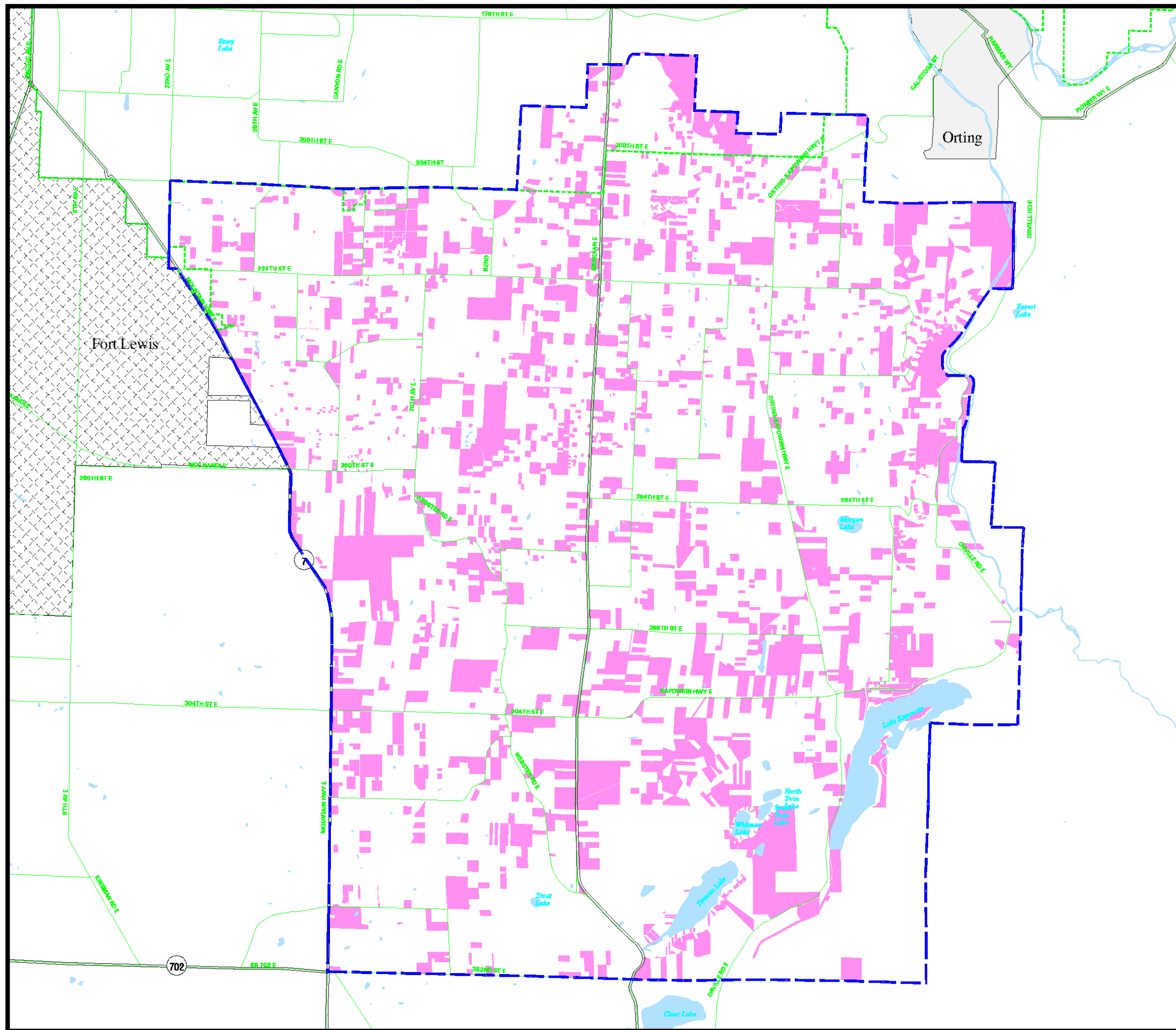


Department of Planning and Land Services  
Plot Date: April 19, 2006

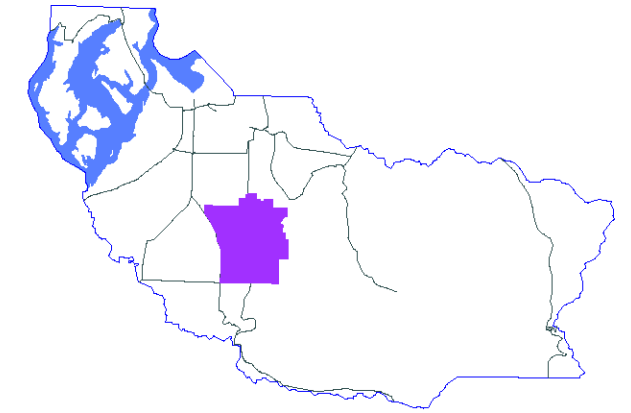
**Graham  
Community Plan**










**Pierce County, Washington**



**Vacant Land**

 Vacant Land

Source: Pierce County Assessor/Treasurer Land Use Code Information.

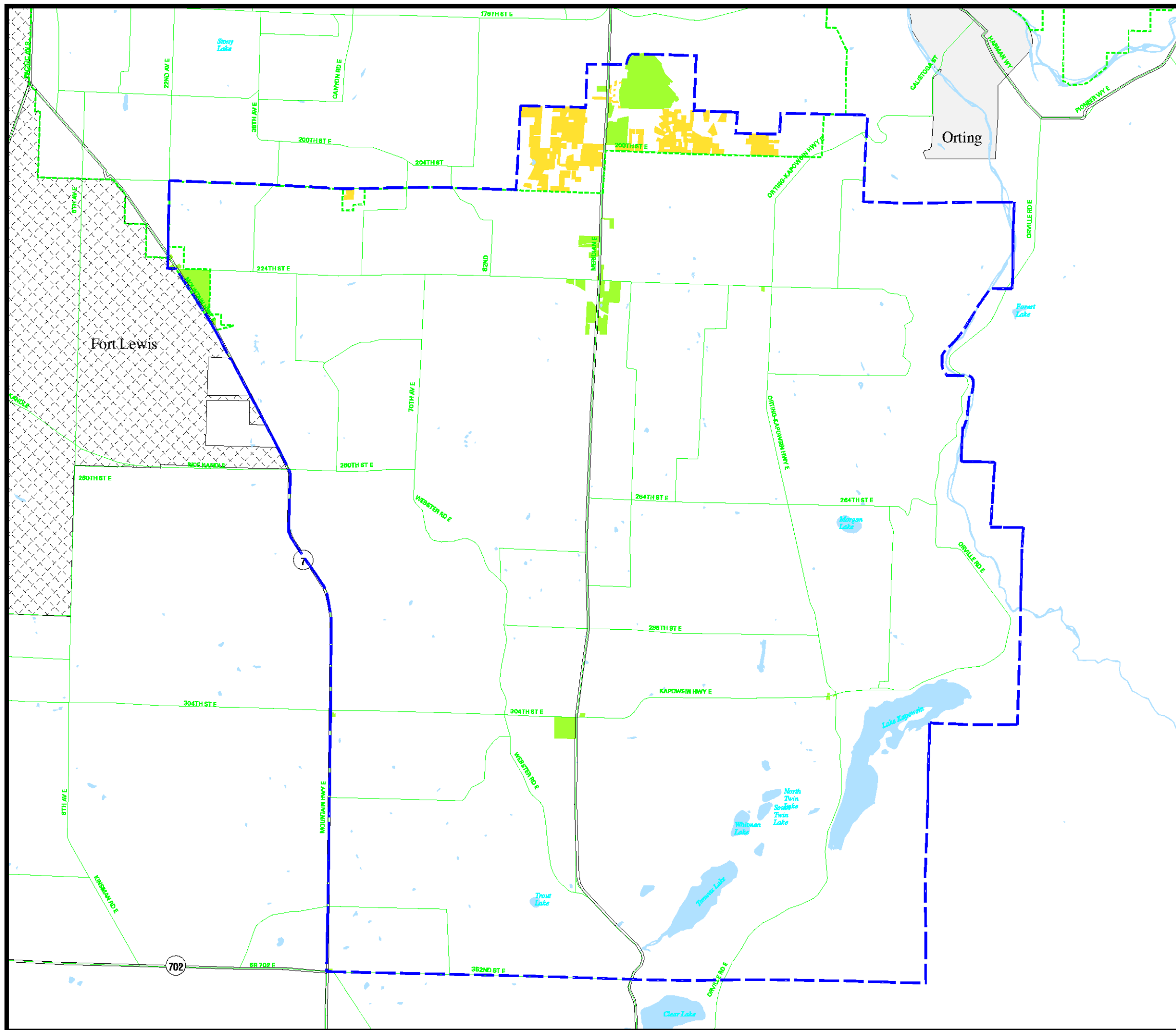
-  Comp. Urban Growth Area Boundary
-  Graham Community Plan Boundary



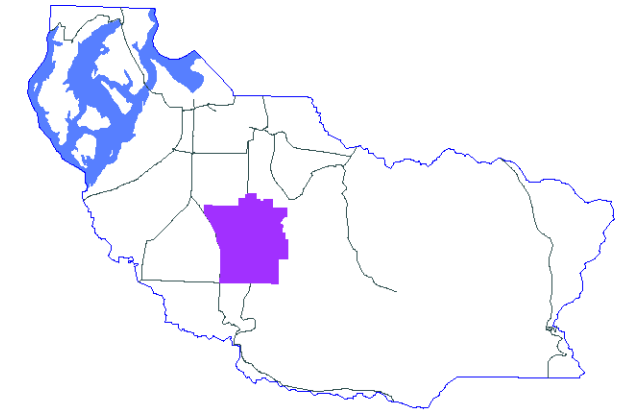
Department of Planning and Land Services

Plot Date: February 07, 2006



**Graham  
Community Plan**



## Pierce County, Washington





## Underdeveloped & Redevelopable Land

-  Underdeveloped Land
-  Redevelopable Land

Source: Pierce County Assessor/Treasurer Land Use Code Information.

Note: Redevelopable commercial and industrial parcels are zoned for commercial or industrial uses with a land value greater than or equal to the improved value. Underdeveloped residential parcels are either zoned for residential uses where the existing land use is residential, with an area greater than or equal to one acre, or zoned for commercial that allows residential uses where the existing land use is residential with an area greater than or equal to one-quarter acre. Underdeveloped only applies to urban land use designations.

-  Comp. Urban Growth Area Boundary
-  Graham Community Plan Boundary



Department of Planning and Land Services








Plot Date: February 07, 2006

# Graham Community Plan



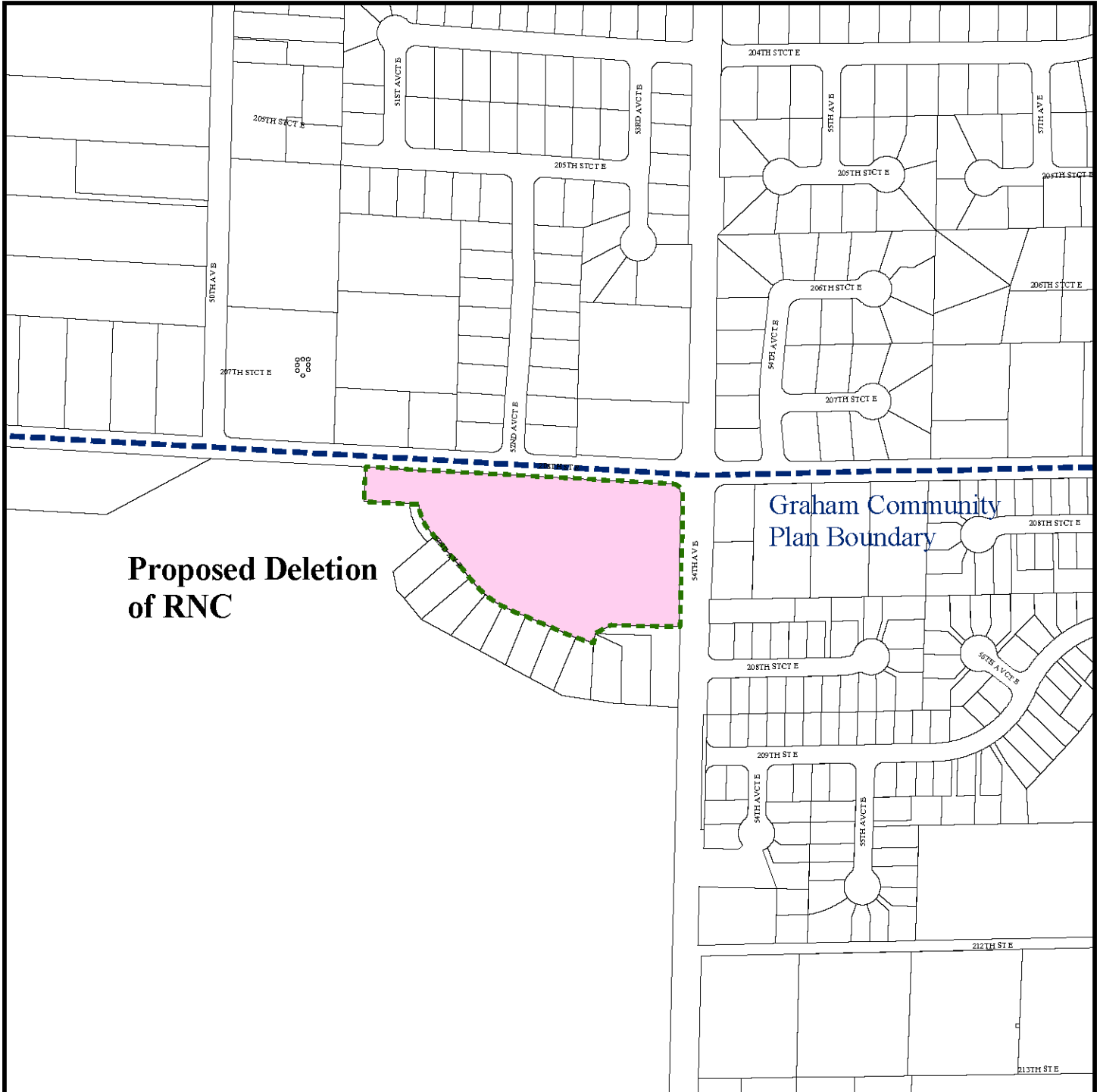
# GRAHAM COMMUNITY PLAN

## Graham Rural Activity Center

- |  |  |   |
|--|--|---|
|  Existing in 1990   |  Vacant |  Existing Boundary |
|  Existing Now       |  Other  |  Proposed Boundary |
|  Vested Application |  |   |

Department of Planning & Land Services  
 February 7, 2007      Scale 1 : 15,840












**Proposed Deletion  
of RNC**

**Graham Community  
Plan Boundary**

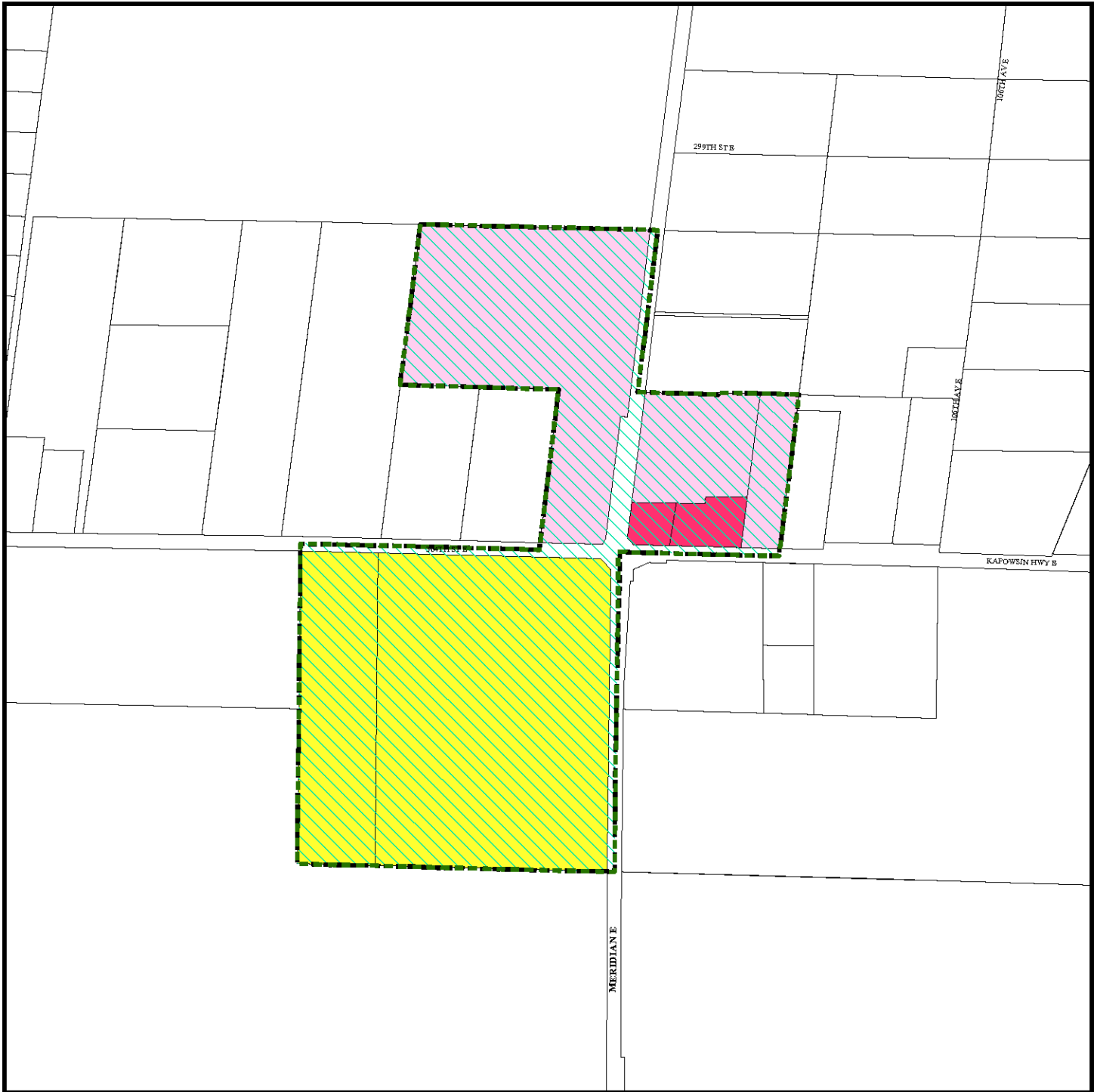
**GRAHAM COMMUNITY PLAN**

**208th St. Rural Neighborhood Center**

- |  |  |   |
|--|--|---|
|  Existing in 1990   |  Vacant |  Existing Boundary |
|  Existing Now       |  Other  |  Proposed Boundary |
|  Vested Application |  |   |

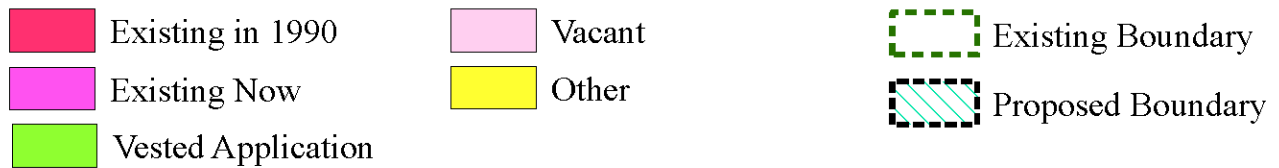
**Department of Planning & Land Services**  
**February 7, 2007**      **Scale 1 : 4,800**





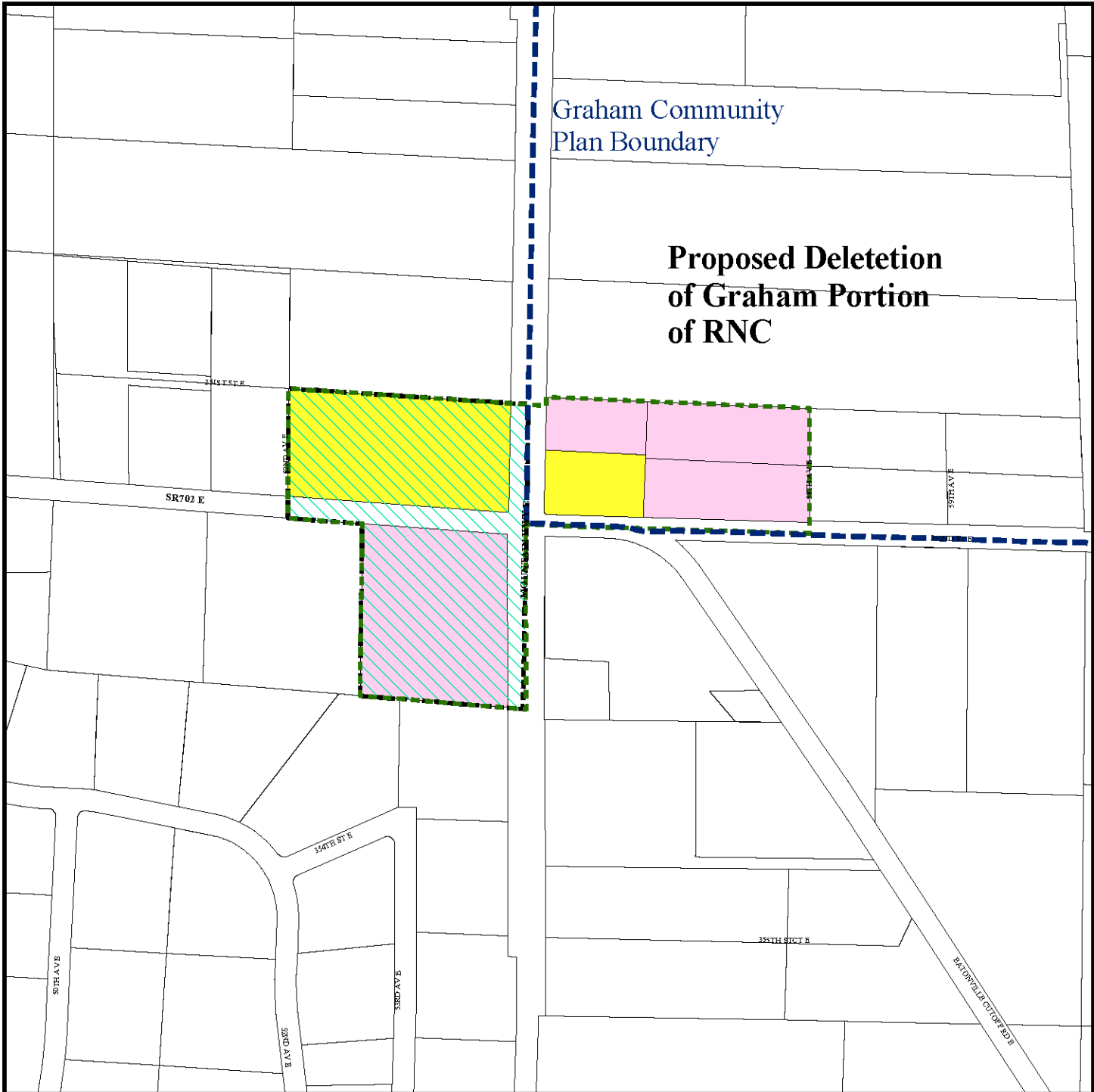
## GRAHAM COMMUNITY PLAN

### Benston Rural Activity Center










Department of Planning & Land Services  
February 7, 2007 Scale 1 : 7,200

 Pierce County  
Geographic Information System



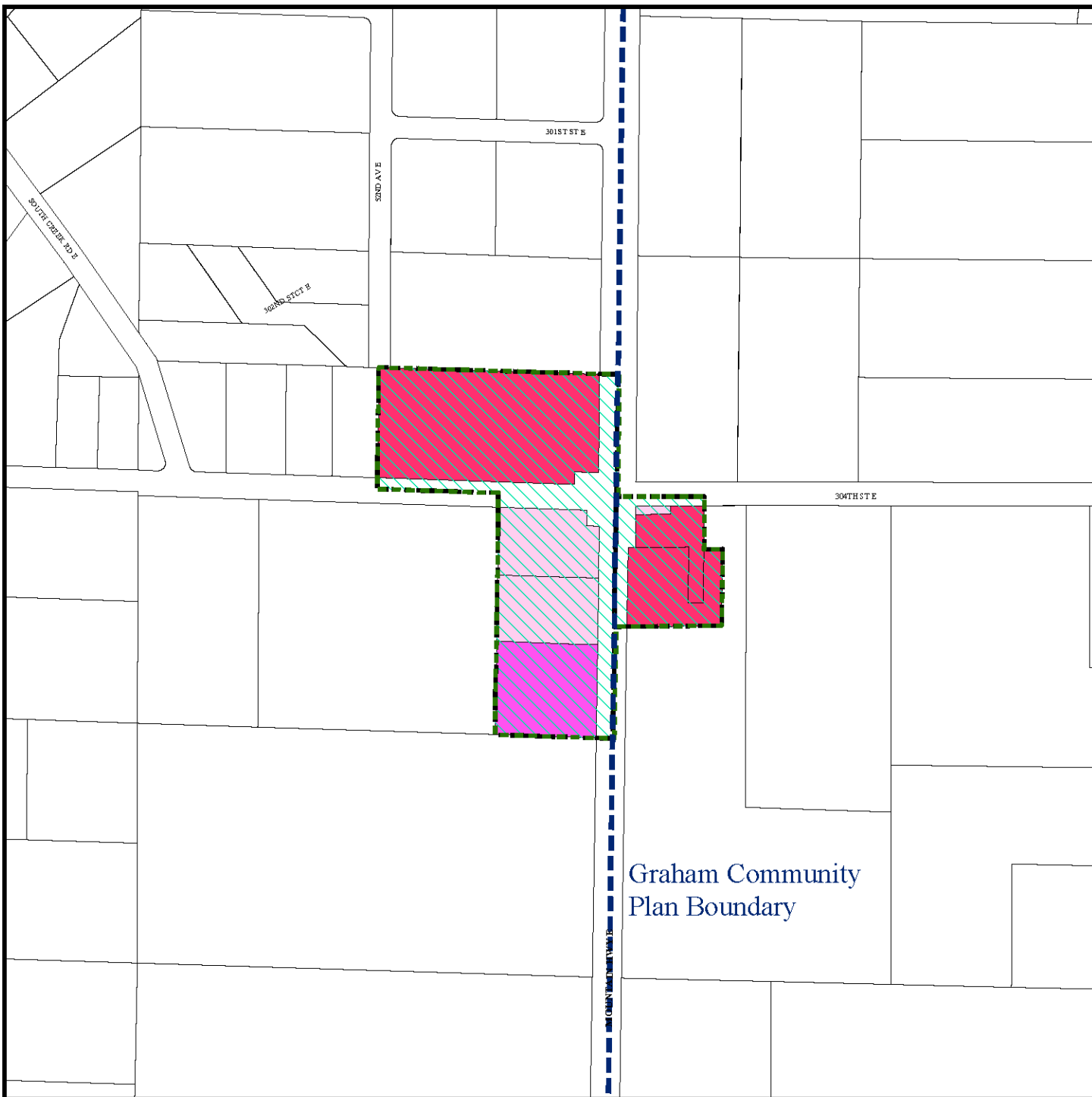
**GRAHAM COMMUNITY PLAN**

**Eatonville Cutoff Rural Neighborhood Center**

- |  |  |   |
|--|--|---|
|  Existing in 1990   |  Vacant |  Existing Boundary |
|  Existing Now       |  Other  |  Proposed Boundary |
|  Vested Application |  |   |








Department of Planning & Land Services  
 February 7, 2007      Scale 1 : 4,800





## GRAHAM COMMUNITY PLAN

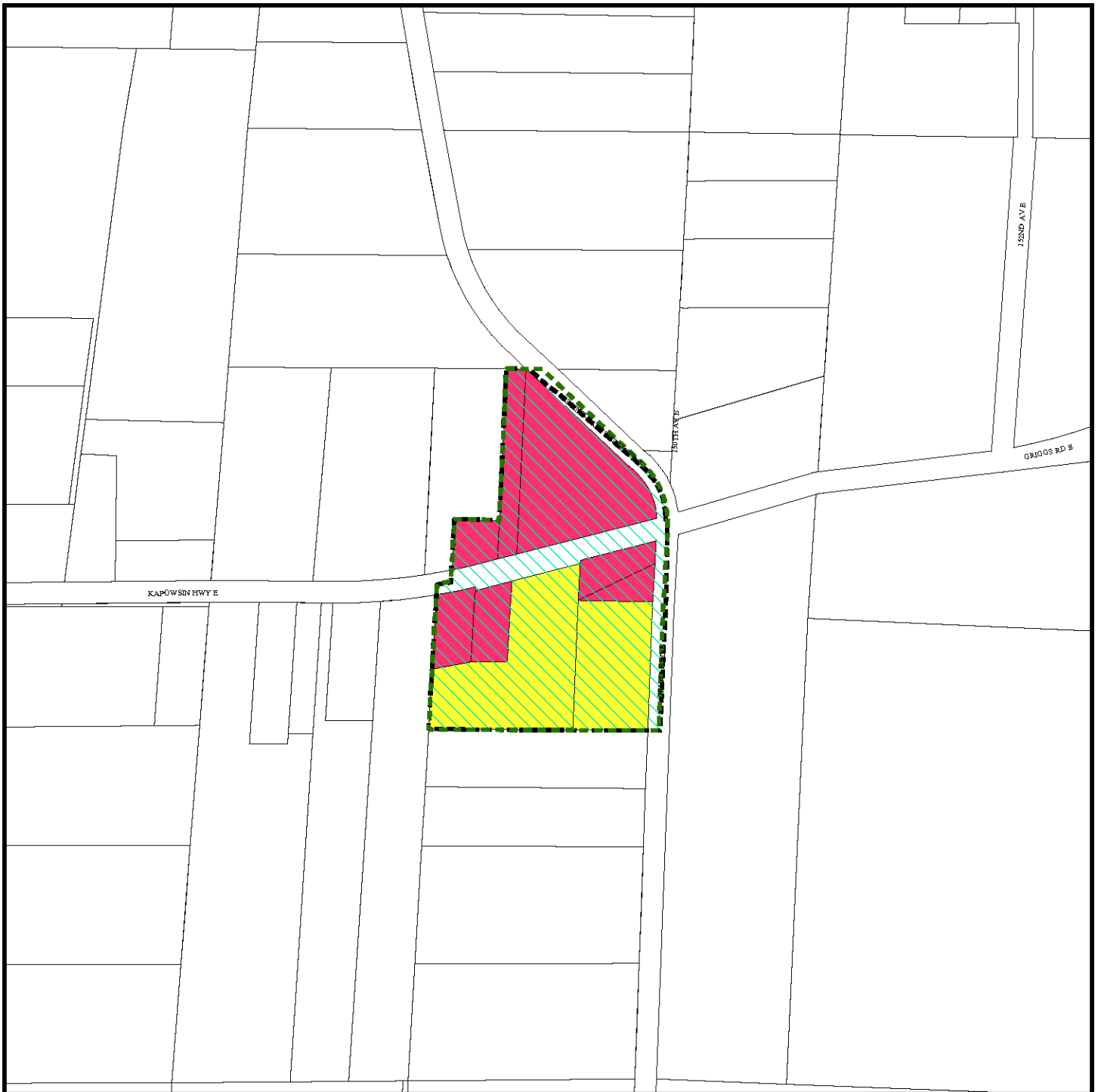
### Johnsons Corner Rural Neighborhood Center

- |  |  |   |
|--|--|---|
|  Existing in 1990   |  Vacant |  Existing Boundary |
|  Existing Now       |  Other  |  Proposed Boundary |
|  Vested Application |  |   |

**Department of Planning & Land Services**  
**February 7, 2007**      **Scale 1 : 4,800**

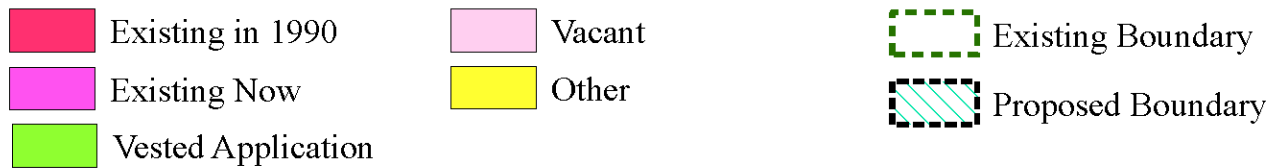






## GRAHAM COMMUNITY PLAN

### Kapowsin Rural Neighborhood Center










Department of Planning & Land Services  
 February 7, 2007      Scale 1 : 4,800





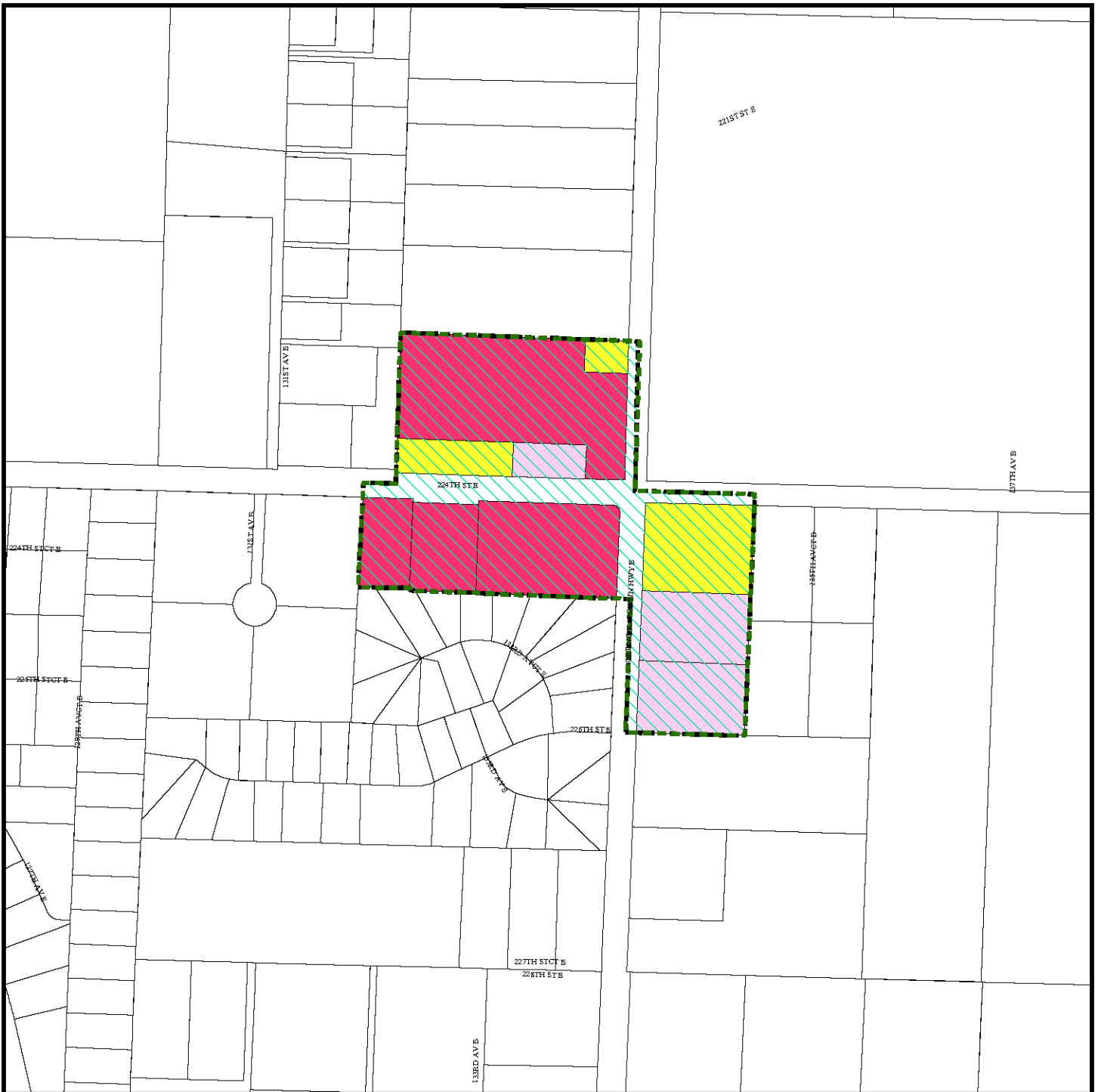
# GRAHAM COMMUNITY PLAN

## SR 7 Rural Neighborhood Center

- |  |  |   |
|--|--|---|
|  Existing in 1990   |  Vacant |  Existing Boundary |
|  Existing Now       |  Other  |  Proposed Boundary |
|  Vested Application |  |   |

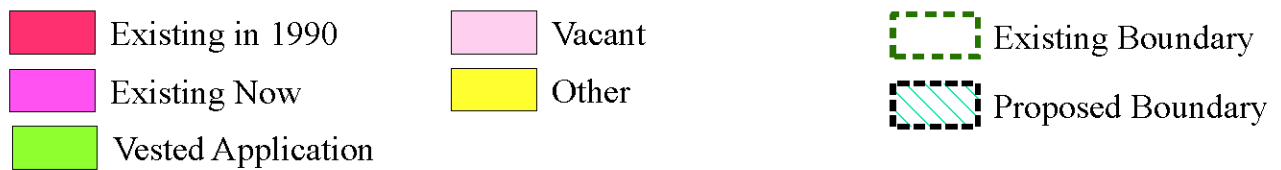
**Department of Planning & Land Services**  
**February 7, 2007**      **Scale 1 : 7,200**





## GRAHAM COMMUNITY PLAN

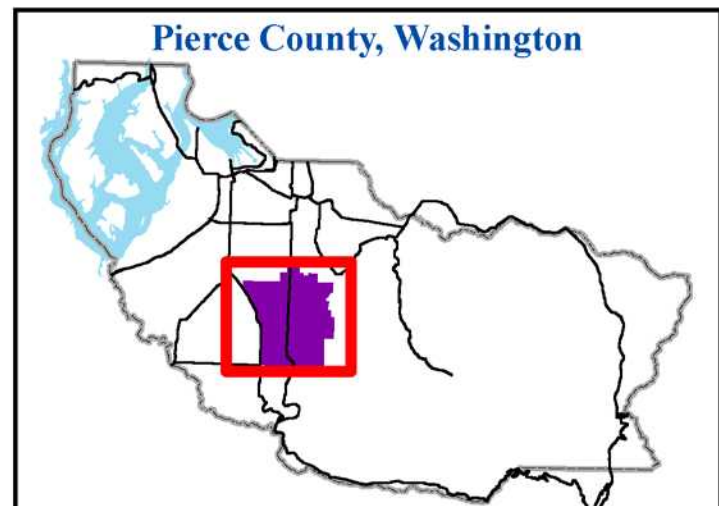
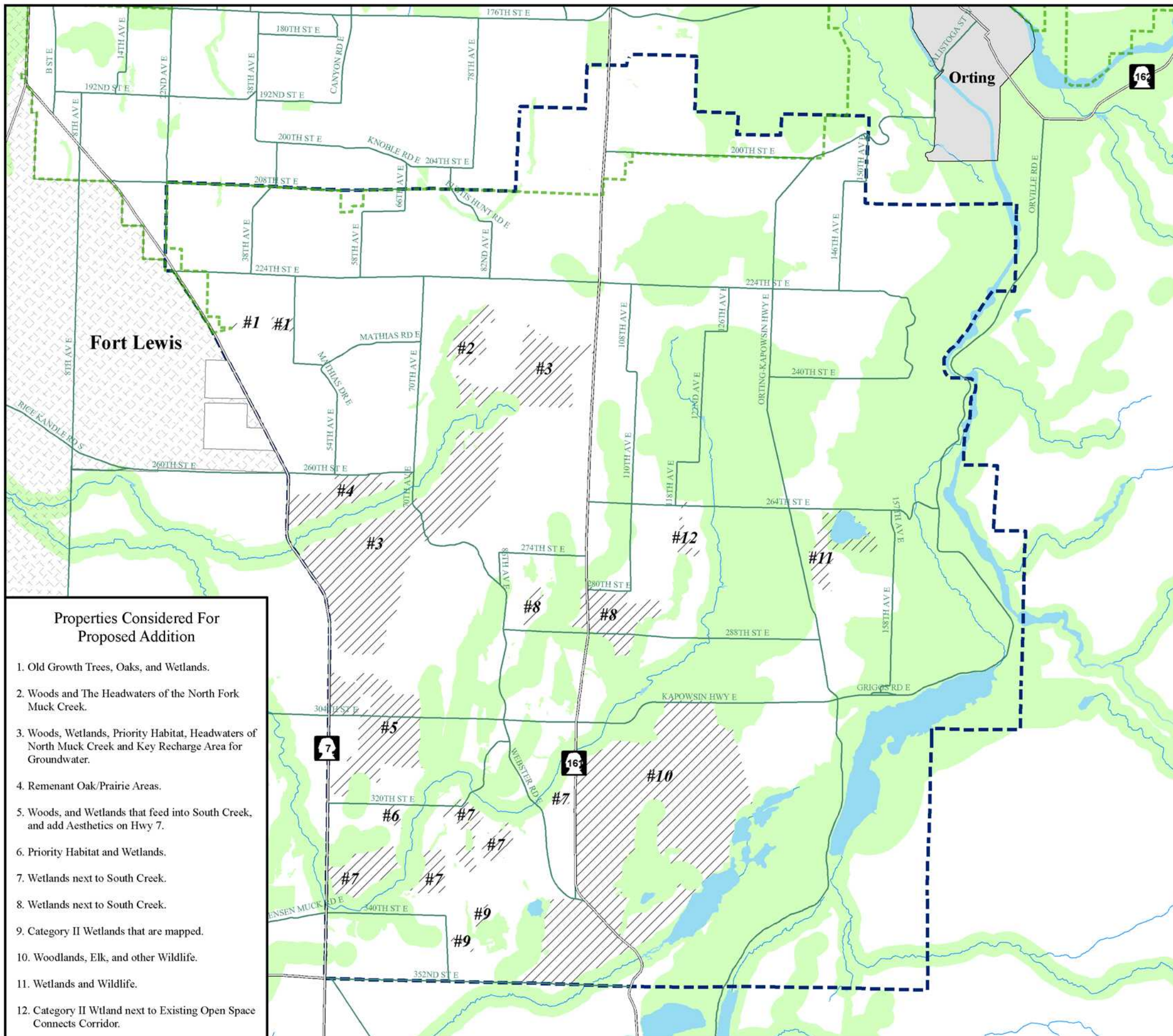
### Thrift Rural Neighborhood Center



Department of Planning & Land Services  
 October 5, 2005      Scale 1 : 4,800







## Open Space Corridors

- Open Space Corridor
- Open Space Corridor Additions

Adopted October 10, 2006 - Ord. #2006-53s  
Effective March 1, 2007

- Existing Comp. Urban Growth Area Bnd.
- Graham Comm. Plan Boundary

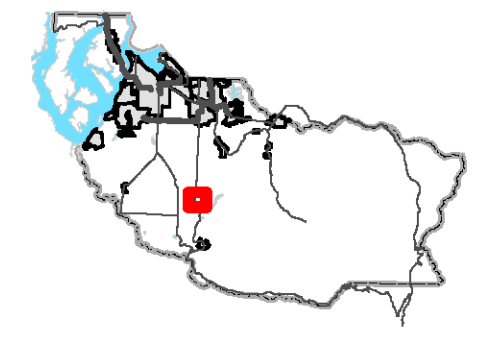


Department of Planning and Land Services  
Plot Date: February 7, 2007

# Graham Community Plan









Pierce County, Washington



Community Development Committee Amendment

Solid Waste Facilities, Essential Public Facilities

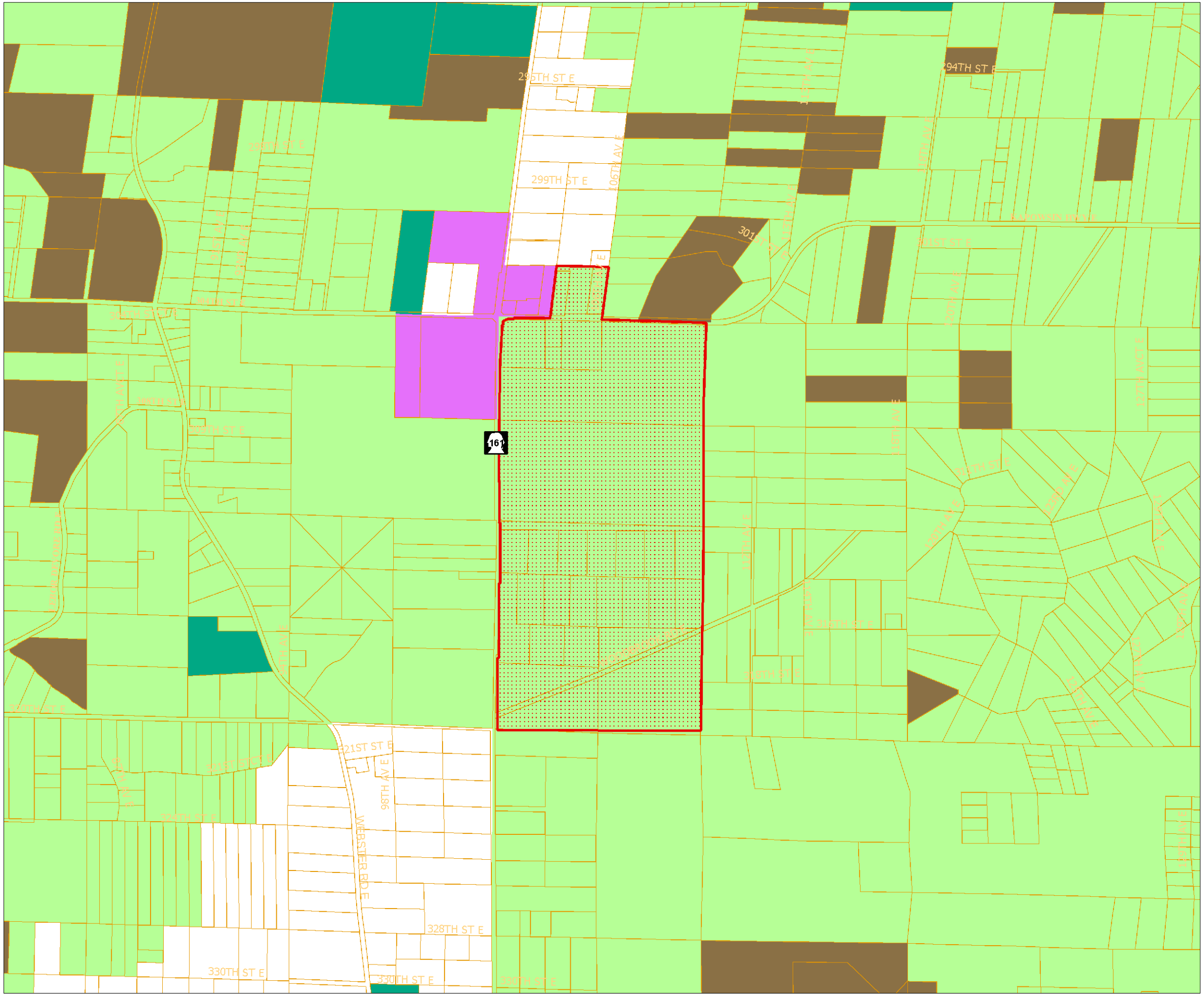
-  Rural Activity Center (RAC)
-  Rural 10 (R10)
-  Rural Sensitive Resource (RSR)
-  Rural Farm (RF)
-  Agricultural Resource Land (ARL)
  
-  Essential Public Facility - Solid Waste Facility Overlay (EPF-SWFO)

Map Document: H:\mxd\graham\graham\_cdc\_amend\_LRI.mxd



Pierce County Department Of Planning & Land Services  
Geographic Information Services Plot Date: August 2, 2006

**Graham**  
**Community Plan**



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## Chapter 3: Community Character and Design Element

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### INTRODUCTION

The character and design found within a community reflects many aspects of the citizens who live there. Some areas feel urban while others have a distinctly rural flavor. The character and design of an area often provides a glimpse into fundamental values and preferences for social interactions. Simply put, character reflects the heart and soul of a community.

Community design deals with the physical elements that compose the character of the community in terms of the look and feel. These physical elements include streets, parks, buildings, open space, and neighborhoods. Through community design policies, individual improvements, such as street construction, park development, land use regulation and new commercial, industrial, residential and civic development can be effectively coordinated with each other to promote a unified community image. Good design invites human presence, allowing for interaction of people and recognizes the functional and visual links between developments. Poorly designed development tends to hinder the development of desired land uses, stifles the human component, and often leads to future blighted areas.

The historic and cultural resources contained within a community provide a sense of place and can also create a link to the community's character. These sites and structures can be highly valued and integrated into new development or when preservation is not possible or appropriate more generally incorporated into the overall design theme or style of a community.

### DESCRIPTION OF CURRENT CONDITIONS

Historically, the greater Graham area has been characterized as rural and agricultural. While the northern and northwest portions of the plan area have experienced urban growth, the rest of the plan area has remained in a large lot, rural residential, or agricultural land use pattern. There are many farms (both hobby farms and commercial farms) and outdoor recreational areas surrounding the many lakes. In fact, it is still common to see people riding horses or enjoying other types of outdoor recreational activities such as biking and boating.

Views of Mount Rainier, called *Tahoma* by the indigenous Native Americans, are prominent from many locations within the plan area, and in some cases are quite spectacular.



*Mt. Rainier "Tahoma"*

## COMMUNITIES

There are many small communities that are located within the plan area. Some of these communities, such as Elk Plain and Graham town center, have experienced development pressure over the last few decades and therefore are more urban in nature, design, and feel. The more rural portions of the plan area contain many smaller communities such as Thrift, Kapowsin, Rocky Ridge, and Johnson's Corner that reflect a historic rural character, often with older buildings and no amenities. These areas commonly contain one or two commercial or civic structures like a little grocery store or a grange.

## HISTORIC AND CULTURAL RESOURCES

Historically, meeting places, markets, stores, and landmarks were located at crossroads that accommodated access, commerce, and communication among people and communities. Many of the communities throughout the plan area, such as Thrift, Graham, Elk Plain, Tanwax, Kapowsin, and Benston, have considerable early history providing these functions.

Preservation and enhancement of special and unique features and places that relate to a community's heritage can bring economic benefits to the community through stimulating internal and external investment, increased visitors and promoting tourism in general, and by increasing pride among the community members. A variety of historic preservation activities throughout a community can support the efforts for resource conservation and also help improve quality of life. Examples include restoration of an old farm house, reuse of a historic schoolhouse or grange, rehabilitation of an old store and retaining its commercial use through compatible commercial additions, and incorporation of historic resources and landmarks into new recreational resources and facilities, including trails or scenic bike or auto routes.

There are a number of federal, state and local laws and programs that apply to historic and cultural resource preservation. Locally, the Pierce County Cultural Resource Inventory provides an indication of those properties or structures that may hold historical or cultural significance. Table F-14 and Map F-21: Historic Resources identify historic and cultural resources within the plan area. These resources include one room schools, stores, post offices and pony express stations, homes of notable persons, noteworthy or rare surviving examples of architectural styles or construction methods or materials from a historic period, farmsteads with assemblage of farm buildings, cemeteries and granges.



**Table F-14: Historical and Cultural Resources**

Elk Plain
Elk Plain School, 22015 22nd Ave. E. Listed in the Pierce County Register of Historic Places #22. Cultural Index #VI-10, Map #1; Parcel No. 0318113005, Estimated b. 1920s, remodeled 1990-92
House, 3912 240th St. E., east of Mountain Hwy; Cultural Index # VI-13, Map #2; Parcel No. 0318246043, 1880, Adj. b. 1915
Rocky Ridge
Jacobson House, 26001 Mountain Hwy E.; Cultural Index #VI-15, Map #3; Parcel No. 0318251036, 1910, Adj. b. 1910
Weyerhaeuser School, 34121 Mountain Hwy. E. Listed in the Pierce County Register of Historic Places #32. Cultural Index #I-75, Map #4; Parcel No. 0417192031, 1910, Adj. b. 1910
Rocky Ridge School (the original one-room school used until 1949), moved from its original location to 25923 - 50th Ave. E.; Map #5; Parcel No. 0318251016, b.1910
Benston
Log house, 29023 Webster Road E. First post office and pony express station. Cultural Index #I-80, Map #6; Parcel No. 0417042002, b.1889, Adj. b. 1938
Joseph J. Richardson House, 12011 Kapowsin Hwy E.; Cultural Index #I-81, Map #7; Parcel No. 0417023022, b.1902, Adj. b. 1925
House and Outbuildings, 27901 86th Ave. E., Cultural Index #I-82, Map #8; Parcel No. 0418332700, House b. 1900, Barn b. 1920
Farm, 29018 Webster Rd.; Cultural Index #I-83, Map #9; Parcel No. 0417051001, House b. 1975, Storage shed, stable, barns b. 1949-1978
House (?) and Barns, 30014 Webster Rd. E.; Cultural Index #I-84, Map #10; Parcel No. 0417043029, House b. 1922
Assembly of God Church, 9409 Kapowsin Hwy. Completed in 1945, currently used as a retail store; Cultural Index #I-85, Map #11; Parcel No. 0417044023, b.1943, Adj. b. 1950
Benston School, 29915 Webster Rd. E. Presently a residence, east side of Webster Rd., north of the Kapowsin Hwy; Cultural Index #I-86, Map #12; Parcel No. 0417043101, House b. 1925
Benston Grange No. 892, 8120 304th St. E. (Kapowsin Hwy) Presently, Anointed Church of Golgotha; Cultural Index #I-87, Map #13; Parcel No. 0417081014, b.1910
Johnson's Corner, 30401 Mountain Hwy.; Cultural Index # I-74, Map #14; Parcel No. 0417072025, b.1920, Adj. b. 1980
Thrift
House, 24018 110th Ave. E.; Cultural Index #I-88, Map #15 Parcel No.: 0418222014, b.1925, Adj. b. 1946
House, 24309 110th Ave. E.; Cultural Index #I-90, Map #16; Parcel No. 0418221002, b.1923, Adj. b. 1946
Graham School, 23315 -108th Ave. E. Original two-room school; Cultural Index #I-89, Map #17; Parcel No. 0418153001, b. 1900

House, 22912 Meridian Avenue East (Not from Cultural Resource Inventory); Map #18; Parcel No. 0418161031, b. 1900

Outbuilding, 9620 204th St. E; Cultural Index #I-94, Map #19; Parcel No. 0418044036 (Note: This structure not in Assessor's record)

Farm remains, 21122 Eustis-Hunt Rd., behind the house, east of Hwy 161; Cultural Index # I-95, Map #20; Parcel No. 0418102021 (Note: This structure not in Assessor's Record)

House, 15230 264th St. E., at Morgan Lake; Cultural Index #I-97, Map #21; Parcel No. 0518303000, House b. 1935, Barn b. 1983, Garage b. 1935, Storage shed b. 1925

House, 21222 Orting-Kapowsin Hwy. Presently, New Testament Christian Church; Cultural Index #I-99, Map #22; Parcel No. 0418111026, b.1940, Adj. b. 1980

House, 25203 Orting-Kapowsin Hwy; Cultural Index #I-101, Map #23; Parcel No. 0418243001, b.1900, Adj. b. 1920 (Note: Earlier owned by Albert Stidham, later by Miekky Otto)

House, 26407 Orting-Kapowsin Hwy; Cultural Index #I-98, Map #24; Parcel No. 0418253025, b.1930, Adj. b. 1930 (Note: Earlier owned by Metzner)

Orting Cemetery, 19715 Orting-Kapowsin Hwy E. (9.46 acres); Cultural Index #7-279, Map #25; Parcel No. 0418011001

### Kapowsin

Kapowsin Post Office, 15711 Foster Street; Cultural Index #I-102, Map #26; Parcel No. 4885100310, b.1919, Adj. b. 1941

House, 29503 158th Ave. E.; Cultural Index #104, Map #27; Parcel No. 0517061022, b.1900, Adj. b. 1900 (Note: Earlier owned by Jim McDonald)

Store Building, 29821 Orting-Kapowsin Hwy; Cultural Index #I-105, Map #28; Parcel No. 0517063019, b.1900, Adj. b. 1900 (Note: Butler's Store)

Kapowsin Grange No. 804, 14810 Kapowsin Hwy; Cultural Index #I-108, Map #29; Parcel No. 0417014053, Built as Clubhouse b.1923

Kapowsin School, 29408 158th Ave. E. Listed in the Pierce County Register of Historic Places #38. Building structure no longer exists; site is of historical significance. Map #30

Key: "b." indicates year built; "Adj. b." indicates adjusted year built

It should be noted that this inventory of historic and cultural resources is intended to be a preliminary list of resources of potential historic significance. Additional detailed individual property-based research is necessary to determine its eligibility for listing in a historic register. Further, other resources may be added to this list in the future based on additional research.

### COMMERCIAL, CIVIC, AND INDUSTRIAL DESIGN

The commercial, civic, and industrial uses within the plan area have developed without any consistent architectural style or site design standards. The layout of building structures within some developments inhibits both vehicle and pedestrian movement. Some developments are experiencing problems with stormwater flooding, inadequate ingress/egress (both externally and internally), and pedestrian safety (limited sidewalks and crossways). There are little or no landscaping or pedestrian amenities within some developments. The commercial areas within

the two Rural Activity Centers reflect a more urban design in terms of building architecture, stormwater facilities, signage, and lighting.

## RESIDENTIAL DESIGN



*Rural house and outbuilding*

The residential stock within the plan area contains a wide mixture of site and architectural design. Some of the newer subdivisions have a more monotonous architectural theme and are situated on small lots, devoid of native trees and vegetation. However, most of the housing stock sits on farms or large country estates, depicting a “gentleman farm” character. Occasionally, residences are used for home occupations and cottage industries.

## SIGNS

As with commercial design issues, signage throughout the plan area lacks any sense of consistent style or order. Some businesses use standard corporate logos and designs which reflect “Anywhere, USA” instead of a rural character. Many of the buildings are plastered with random signage. The proliferate use and combination of sandwich boards, banners, streamers, blinking lighting, and temporary signage creates a cluttered cacophony that is visually disturbing to traveling motorists and citizens who are shopping or using other services. Signs are also attached to public utility poles and fences outside of designated commercial and industrial areas, which detract from the rural character. In some instances signs don’t match the businesses they intend to advertise, are made of unattractive materials/colors, contain information that is misspelled, or are in a state of disrepair (rusty, broken, ripped, outdated, etc.).

## TREES AND VEGETATION

Within the more urban portions of the plan area (far north and northwest), trees and vegetation have been removed during the development process and little or no landscaping has been installed to replace what was lost. Stormwater facilities, often constructed as rectangular pits, are devoid of any vegetation. The rest of the plan area still retains a fair amount of vegetation, in a mix of native trees and understory and agricultural pastures and crops.

## VIEWSHEDS AND AESTHETICS

Scenic views of Mount Rainier, the Cascade Mountain range, pastoral and agricultural settings, lakes, and other natural areas are abundant throughout the plan area. On Graham hill, the Olympic Mountain range and sunset vistas to the west can also be viewed and enjoyed. Old barns and log cabins are scattered throughout and also



*Debris and junk vehicles*

reflect the area's historic rural and agricultural character. Unfortunately, junk cars and other types of debris can also be found abandoned along roadways and on properties, which creates an eyesore and nuisance to residences and tourist travelers.

## DESCRIPTION OF DESIRED CONDITIONS

### HISTORIC AND CULTURAL RESOURCES

Historic and cultural resources provide a link to the community's rural and natural resource-oriented past. Structures and sites with historical or cultural significance should be retained and when feasible restored and integrated into new developments. Historic and cultural resources should receive special attention and review during the permitting process on any proposals for alterations, additions, or demolition. Signage should be installed to identify historic or cultural resources. Roads that were used as historical routes or trails should also be clearly marked. A historical society should be created to promote preservation of designated historic and cultural resources and provide education to citizens, schools, and tourists regarding the historic past of the plan area.

### DESIGN

#### DESIGN STANDARDS

New development and structures should respect and complement the existing rural and agricultural character through the use of appropriate site design, fencing, construction materials, architectural design, signage, setbacks, and placement of structures. Site and architectural design standards and guidelines and sign regulations should be implemented to foster the rural character and a unified sense of design in a manner that embraces individual flexibility. The concept of themed communities or franchise-type development is discouraged.

#### SITE DESIGN

Areas of existing vegetation and soils should be preserved and integrated into new developments to help maintain natural hydrologic functions and ecosystems and the rural character. Where preservation of native soils and vegetation is not feasible, native plants should be utilized in the landscaping to maintain the natural character. Clearing and grading activities should be prohibited prior to permitted building activity, except for installation of roads and infrastructure, and the amount of cut and fill should be



*Preserved foreground or nesting*

minimized to the greatest extent possible. Existing critical areas and associated buffers should be maintained and integrated into the site design. Low impact development techniques should



be utilized to address stormwater drainage issues and the use of traditional conveyance and pond systems should be minimized. Where detention and retention stormwater facilities are used, these facilities should be designed to resemble natural wetland systems, employing gentle slopes and native trees and vegetation in the overall design. Buildings and infrastructure should be oriented on the site to respond in the best manner to natural elements such as sun, wind, and rain. When possible, building structures should be grounded or “nestled” into the landscape and clustered in pockets with open space situated towards any major road to preserve the rural character. Siting buildings on ridgelines should be avoided to protect the visual quality of skylines.

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## RESIDENTIAL DESIGN

Residential development should reflect the rural character of the plan area. In the urban portions of the plan area, residential designs should provide for urban amenities such as sidewalks, street trees, street lights, adequate on-street and off-street parking, school bus kiosks, and neighborhood park and recreation facilities. The scale and intensity of urban residential development should be reduced to provide a transition between the higher intensity residential uses typically found in South Hill and the rural portions of the plan area. Rural residential development should occur in a larger lot pattern and reflect a variety of rural or agricultural character through the use of design features such as covered porches and verandas. Common open space areas should be integrated into residential developments to preserve critical areas and preserve a rural feel. Design and architectural standards and guidelines should be developed for urban single-family and multifamily residential developments and to prevent monotony of dwelling units along streetscape. Home occupations and cottage industries should be allowed but only in conformance with standards that ensure these uses reflect and maintain an appropriate residential character.

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## COMMERCIAL, CIVIC AND INDUSTRIAL DESIGN



*Pedestrian amenities, lighting, signage and walkways*

Commercial, civic and industrial uses should be designed in compact nodes with an architectural style that reflects the rural character of the plan area. Architectural features such as covered entryways, walkways, sloped or stepped roof and porch designs should be integrated into storefronts and the use of wooden or natural construction materials should be incorporated to elicit a rural town feeling. All pedestrian walkways and access areas should be clearly signed, lighted, and delineated on the concrete or asphalt to promote pedestrian safety.

Commercial developments should incorporate pedestrian amenities such as benches, trash receptacles, fountains, and plazas. Service areas and lighting should be designed to minimize any impacts from glare, odor, and noise through

the use of appropriate location, setbacks, landscaping, fencing or screening methods, and orientation. Similarly, the mechanical and HVAC equipment for a building should be screened from public streets, building approaches, and adjacent properties.

Native plants and trees, integrated into the landscaping design, should be used to soften the built environment and enhance the pedestrian experience. Natural landscaped areas should be placed between proposed development and adjacent public streets or residential development. Buildings situated on sites that have sloping topography should follow the natural terrain in a manner that minimizes earth disturbance and integrates the building into the site.

Parking facilities for commercial uses should provide for adequate parking and include some larger spaces that accommodate bigger vehicles such as trucks, RVs and truck-trailer combinations. Landscaping within parking lots should include the use of native vegetation and trees which would provide shade during the summer months. These planting areas should be constructed in bio-retention facilities that could serve a multi-function use as stormwater facilities. The use of pervious pavements for parking lots is also encouraged to help reduce stormwater impacts. Parking areas for new commercial developments should be connected to other commercial parking facilities to increase access between commercial areas and decrease the number of access points on major arterials.



*Commercial development integrated into the landscape and reflecting rural character*

## SIGNS



*Controlled signage*

The amount, scale, and type of signage within commercial and industrial areas should be controlled in a manner that promotes a unified appearance and rural character. The use of natural materials, such as stone and wood, and colors should be integrated into the design of signage. The number and size of signs affixed to buildings and freestanding signs located adjacent to buildings should be limited. Murals on the sides of commercial buildings that reflect the community's rural and natural resource industrial history are encouraged. Signage should be maintained to keep up visual attractiveness and old signage that is in a state of disrepair should be updated.

Signs should also be used to better convey information throughout the community plan area. Individual communities, such as Elk Plain, Graham, Thrift, Kapowsin, Rocky Ridge, etc. should contain signage at the entry points to identify them as distinct communities and mark any historical significance. The amount and quality of informational signage within the plan area



should be improved. Directional signage could be installed to point out cultural and historic resources and historic routes and trails, as well as other points of community interest. Animal warning signs should be posted to notify traveling motorists of potential accident areas where deer and elk crossing is common.

## FISH/WILDLIFE HABITAT AND DEVELOPMENT

The amount of disturbance to sensitive fish and wildlife habitat areas should be avoided or greatly minimized through a conscientious design process. Open space areas should be used in key locations to maintain fish and wildlife habitat and roadway systems and clusters of development can be located in areas where the least amount of impact will occur. In particular, roads, bridges, and culverts should be designed so that these systems will not block or impede the passage of fish or wildlife.

## VIEWSHEDS AND AESTHETICS

Maintaining views and a pleasant looking environment is an integral component of protecting the quality of life within the plan area. Views of important scenic resources within the plan area, such as Mt. Rainier, should be preserved during any future development process as well as views of rural elements such as pastures. To accomplish this, design standards should be implemented that guide placement of structures, structure height, and tree removal/cutting and all utilities should be placed underground. Junk and debris that is located throughout the plan area should be removed and adequate requirements should be adopted to screen unsightly outdoor storage from public view. New wireless communication facilities should be limited or screened to preserve the rural character of the plan area. The type, location, and style of fencing within the plan area should be regulated to ensure that any new fencing promotes the rural character.

## OPEN SPACE AND GREENBELTS

Open space areas should be conserved through application of design standards that minimize environmental and visual impacts of proposed development. Some ideas include the use of low impact development techniques, preservation of native vegetation and soils, nestling structures to blend into the landscape, and green building techniques. Open space areas should be set aside into separate tracts of land and signage to indicate that it is being maintained as open space. Whenever possible, open space tracts should be connected to provide wildlife movement corridors. Greenbelts should be used for passive recreation and to provide buffers between uses and visual relief from the built environment.

## CULTURAL RESOURCES POLICIES

- GOAL GR CR-1** Recognize and preserve existing places and structures of historic and cultural significance within the plan area, thereby strengthening the area's character and sense of place.

- GR CR-1.1 Recognize the unique characteristics of individual communities within the plan area.
- GR CR-1.2 Retain existing distinctive and historic rustic structures such as farm buildings and log cabins.
- GR CR-1.3 Encourage a diverse mix of rural architecture that currently characterizes the plan area.
- GR CR-1.4 Discourage themed communities in the plan area.
- GR CR-1.5 Promote the history of the plan area through special events and maintaining unique structures.
- GR CR-1.6 Acknowledge the history of the community within proposed designs.
- GR CR-1.7 Encourage school districts to consider school names that reflect the history of the surrounding area.
- GR CR-1.8 Consider whether roads located within the plan area could be designated as historic routes or trails.
- GR CR-1.9 Investigate the feasibility of designating Kapowsin as a historic district.
- GR CR-1.10 Encourage protection and preservation of recognized landmarks and buildings through a variety of incentives, including financial, aimed at rehabilitation or restoration that meets standards.
- GR CR-1.11 Encourage selection of sites that include historic resources of architectural, historical, or archeological value, for public projects involving housing, parks and recreational use, education, or civic facilities as long as the projects do not negatively impact the protection of sacred sites of religious significance or traditional cultures.
- GR CR-1.12 Establish linkages to public institutions, private individuals, and non-profit, locally-based organizations to increase opportunities for cultural enrichment with a heritage component; utilize the local community to initiate and organize cultural and other programming and activities including festivals, street fairs, performances, conferences, classes, workshops, trips, tours, etc.
- GR CR-1.13 Pursue the creation of a historical society for the communities of Graham, Kapowsin, Thrift, Elk Plain, Rocky Ridge, etc. located within the plan area.
- GR CR-1.14 Identify historic sites through the use of signage.

## DESIGN AND CHARACTER POLICIES

### GOALS

- Enhance the rural character of the plan area and preserve the history of the area.

- Preserve the natural feel and scenic beauty of the plan area. People choose to live in Graham and the surrounding area because they like the feeling of being in the country.
- Establish development standards that encourage a variety of building designs suitable to the area's rural character, preserve open space and greenbelts, and promote surface water management using low impact development techniques.
- Support the development of a transportation network that provides for ease of travel throughout the community, convenient access to commercial centers, and a variety of modes of travel linking schools with other areas, using a variety of native plants to maintain a scenic appearance for people using the roadways.
- Ensure that signs in the plan area are at a scale and design appropriate to a rural atmosphere, while accommodating the need to provide information on events, activities, and businesses in the community.
- Promote opportunities to increase public appreciation and awareness of the history of the Graham area, encourage preservation of historic sites and structures, and promote the continuation of traditional public events.
- Designate a community service area in central Graham to accommodate a community center, recreation opportunities, museum, visitor information, and social services.
- Recognize that the Graham Community Plan area serves as a gateway to Mount Rainier and provides a transition from the higher density/intensity Urban Growth Areas to rural and resource areas.

## DESIGN

### DESIGN STANDARDS AND REVIEW

- GOAL GR D-1** Guide development in a manner that will further enhance the existing rural character and identity of the plan area. Compatibly design proposed residential, commercial, civic, and industrial development within the visual context of the surrounding area and be sensitive to existing uses and site conditions.
- GR D-1.1** Site plans for all proposed multifamily, commercial, civic, office/business, utility and industrial developments shall clearly illustrate all proposed buildings, landscaping, tree retention and replacement areas, critical areas and associated buffers, parking areas, lighting, utilities, stormwater facilities, access points and streetscapes, public spaces or common areas, pedestrian amenities, loading areas, trash and recycling collection areas, fencing, sidewalks and walkways, bikeways, and adjacent properties.

- GR D-1.2 Site plans for all proposed land divisions shall include items such as proposed lots, building areas, landscaping, tree retention and replacement areas, critical areas and associated buffers, parking areas, lighting, utilities, stormwater facilities, access points and streetscapes, public spaces or common areas, on-site recreational areas, native vegetation retention areas, buffers, fencing, sidewalks and walkways, bikeways, and adjacent properties.
- GR D-1.3 Establish architectural standards and guidelines and an architectural design plan review and approval process for proposed urban single- and two-family, multifamily, commercial, civic, office/business, utility, and industrial developments.
- GR D-1.4 Require proposed lighting to be reviewed during the design review process to ensure compatibility between adjacent uses and minimize glare impacts onto roadways and critical areas.
- GR D-1.5 Create design standards for pedestrian amenities which enhance the quality of sidewalks and outdoor gathering spaces within the various rural commercial centers.

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SITE DESIGN

- GOAL GR D-2 Encourage site design that responds to the existing character and conditions of the site and maintains the rural character.
  - GR D-2.1 Preserve natural character, functions, and values during the development process through techniques such as low impact development.
  - GR D-2.2 Maintain the rural character of the plan area's distinctive natural environment by preserving open space, greenbelts, lakes, streams, wetlands, and agricultural areas.
  - GR D-2.3 Preserve areas of native vegetation and existing stands of large trees by requiring integration within proposed developments.
  - GR D-2.4 Provide incentives to preserve open space, native tree stands, and vegetation.
  - GR D-2.5 Where feasible, retain existing native vegetation in commercial centers to maintain the natural character.
  - GR D-2.6 Require that native vegetation be re-established on properties where unpermitted clearing has occurred.
  - GR D-2.7 Minimize the amount of cutting and filling on a site to ensure that the natural topography of the land is retained.
  - GR D-2.8 Align roads and developments to follow the natural contours of the site.
  - GR D-2.9 Prohibit clearing, grading, and vegetation removal in residential developments, except for construction of roads and utilities, until building permits are issued.
  - GR D-2.10 Incorporate critical areas and associated buffers, significant trees or stands of trees, or other important natural features into the site design.
  - GR D-2.11 Encourage the utilization of low impact development measures.

- GOAL GR D-3** Retain native trees and vegetation and install additional landscaping to foster the rural character.
- GR D-3.1** Reinforce the rural character of the plan area through the use of native plant species.
  - GR D-3.2** Increase the quantity of plantings within parking lots to meet screening, buffering, and functional requirements.
  - GR D-3.3** Emphasize the use of native plant species in landscaping design.
  - GR D-3.4** Provide credit for the retention of significant trees and good native vegetation in place of new landscaping.
  - GR D-3.5** Provide native plantings around entry signs to communities in the plan area to enhance the appearance of the entry.
  - GR D-3.6** Comply with countywide standards for maximum impervious surface, minimum native vegetation, and tree retention.
  - GR D-3.7** Salvage and replant native plants that lie in the path of development.
  - GR D-3.8** Plant native shrubs and trees in a design that mimics the historic natural landscape and vegetative pattern.
- GOAL GR D-4** Maintain natural hydrologic cycles and functions during the development process.
- GR D-4.1** Design storm drainage facilities that mimic hydrologic/environmental functions while providing adequate treatment and collection.
  - GR D-4.2** Design stormwater management facilities to resemble natural features by incorporating gentle side slopes, curvilinear geometry, and native vegetation.
  - GR D-4.3** Encourage the use of low impact development techniques which enhance the natural characteristics of the plan area and better manage storm drainage at the source to preserve native forest vegetation and minimize impervious surfaces in development.
  - GR D-4.4** Maintain predevelopment flow path lengths in natural drainage patterns, wherever possible.
  - GR D-4.5** Minimize the use of traditional conveyance and pond technologies to manage stormwater quality and quantity.
  - GR D-4.6** Minimize the potential impacts of runoff to existing waterways.
  - GR D-4.7** Ensure that appropriate erosion sedimentation controls are provided in concert with proposed development.
  - GR D-4.8** Integrate small, dispersed bioretention areas to capture, store, and infiltrate stormwater on-site.
- GOAL GR D-5** Site buildings and infrastructure to respond to natural elements (e.g., sun and wind), reduce visual impact, and maintain rural character.

- GR D-5.1 Orient space, streets, parking areas, buildings, and groups of buildings to take full advantage of the sun for winter warmth and mitigation of summer heat. When possible, place buildings to the north of outdoor spaces with opportunities for dappled shade from trees or trellises.
- GR D-5.2 Configure streets and plazas to reduce the effect of winds on the plaza.
- GR D-5.3 Locate buildings at the toes of slopes and edges of meadows to allow for natural windbreaks and create a feeling of shelter.
- GR D-5.4 Cluster development to maximize visually significant, unfragmented open space.
- GR D-5.5 Nestle structures below ridgelines, behind natural vegetative screens, and within the folds of hills. Where natural vegetation and topography do not allow for *hiding* development, locate structures in subordination to the horizon and any significant viewsheds.
- GR D-5.6 Avoid siting buildings on prominent ridges to protect the visual quality of skylines and ridgelines.
- GR D-5.7 Prohibit placement of building lots in floodways and floodplains.

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RESIDENTIAL

- GOAL GR D-6 Encourage residential design that responds to the existing character and conditions of the site and evokes a rural character.
  - GR D-6.1 Encourage large lot residential development in a style consistent with the rural character of the plan area.
  - GR D-6.2 Encourage residential developments to include school bus kiosks.
  - GR D-6.3 Encourage small farms, ranches, and a homestead character.
  - GR D-6.4 Develop specific design guidelines for single-family and multifamily residential development to address site planning and building placement. Single-family guidelines should provide for retaining the existing rural character of homes in the plan area.
  - GR D-6.5 Enhance the visual quality of neighborhood streetscapes through the use of tree planting and installation of native vegetation.
  - GR D-6.6 Encourage dwelling units that utilize architectural features, including porches and verandas which contribute to the country feeling of the plan area.
  - GR D-6.7 Encourage a broad variety of architectural styles that reflect the diversity of residents, yet maintain compatibility within projects.
  - GR D-6.8 Provide incentives for innovative architectural design.
  - GR D-6.9 Avoid monotonous street fronts in residential developments.
    - GR D-6.9.1 Vary the street front facades and colors of structures within the same block.



- GR D-6.10 Provide and incorporate common open space areas between clusters of homes.
  - GR D-6.10.1 Open space area may encompass environmentally sensitive areas or rural farm/pasture land areas.
  - GR D-6.10.2 Connect open space areas with clusters of homes through a system of walking trails.
- GR D-6.11 Consider placing the largest and most architecturally significant homes on corner lots designed with wrap-around porches.
- GR D-6.12 Provide road and/or pedestrian and bike connections between subdivisions and when possible, share common open space in order to foster a sense of neighborhood.
- GR D-6.13 Maintain adequate side yard setbacks
  - GR D-6.13.1 Side yard setbacks should be at least 10 feet on either side of the structure.
- GR D-6.14 Provide perimeter buffers of native vegetation in new residential developments.
  - GR D-6.14.1 Perimeter buffers should be a minimum of 50 feet.
- GR D-6.15 Design residential developments to allow service providers, such as fire and rescue equipment and personnel, waste and recycling collection vehicles, and school and transit buses, adequate access to conduct operations.
  - GR D-6.15.1 When structures are located closer than 5 feet of the property line or within 10 feet of each other, require fire-resistant materials (with a minimum of a one-hour fire rating) on the exterior of homes (including walls, eaves, and roofing) and sprinkler systems (minimum of NFPA 13D specifications).
  - GR D-6.15.2 No portion of the building setback, including decks, tip-outs, bay windows, and rooflines, should project into the building setback when homes have been allowed a variance or Planned Unit Development exception to build closer than the 10 foot side yard setback requirement.
  - GR D-6.15.3 Privacy fencing should contain an emergency gate access into the backyard space to allow access by fire and rescue personnel.

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COMMERCIAL, CIVIC, AND INDUSTRIAL

- GOAL GR D-7 Encourage high quality, compact commercial, civic, and industrial development consistent with the rural character of the plan area.
  - GR D-7.1 Create compact nodes of development appropriate to the scale and character of the surrounding rural areas.
    - GR D-7.1.1 Connect buildings to create compact commercial, civic, and industrial development.
    - GR D-7.1.2 Encourage campus layout of commercial, civic, and industrial developments.
    - GR D-7.1.3 Incorporate historic or cultural resources into the site design.

- GR D-7.1.4 Concentrate community facilities around public squares or plazas at the intersection of community roadways or pathways.
  - GR D-7.1.4.1 When possible, place major civic buildings around or near these public squares or plazas.
- GR D-7.2 Retain or create buffers of native vegetation between proposed developments and any adjacent public streets or existing residential developments.
  - GR D-7.2.1 Buffers shall be a minimum of 35 feet wide.
- GR D-7.3 Service areas and outdoor storage areas shall be located in the rear of buildings and screened from adjacent properties, public streets, or public spaces.
  - GR D-7.3.1 Trash/recycle areas and outdoor storage areas shall be screened with solid type fencing (e.g., board on board or stone/concrete) or dense vegetation at least 6 feet high.
  - GR D-7.3.2 Loading docks shall be screened from adjacent properties and public streets through the use of densely vegetated buffers.
- GR D-7.4 Utilize separated walkways through parking lots or other motorized vehicle travel ways.
- GR D-7.5 Provide lighting in all commercial, civic, and industrial developments that is compatible with surrounding development and enhances personal safety.
  - GR D-7.5.1 Direct all parking area or building lighting to prevent glare toward public streets, public open spaces, wetlands, fish or wildlife habitat areas, or adjacent properties.
  - GR D-7.5.2 Lighting in parking areas and around buildings should provide an adequate amount of illumination to provide a feeling of safety.
  - GR D-7.5.3 Consider the use of softer colored or diffused lighting instead of bright fluorescents.
  - GR D-7.5.4 Require proposed lighting to be reviewed during the design review process to ensure compatibility between adjacent uses and minimize glare impacts onto roadways and critical areas.
- GR D-7.6 Design commercial, civic and industrial buildings and structures to reflect the rural character and to be compatible with surrounding uses.
  - GR D-7.6.1 Diversify the scale and mass of proposed buildings through the use of architectural details such as covered entryways, overhangs and projections, building modulation, etc.
    - GR D-7.6.1.1 Break up large buildings with facade modulation.
    - GR D-7.6.1.2 Large box-style buildings are highly discouraged.

- GR D-7.6.1.3      Avoid building large, monolithic structures. Buildings should comprise a complex of smaller buildings or parts that manifest their own internal social realities.
- GR D-7.6.1.4      Vary the roof pitches, with the largest roofs over the main portion of the building and lesser, shallower roofs at the outer edges of the structure.
- GR D-7.6.2        Encourage the use of wood or other natural materials finished in natural colors in rural town or ranch houses appropriate to the rural character.
- GR D-7.6.2.1      Use natural materials that reflect an organic integrity and harmony with the natural surroundings.
- GR D-7.6.2.2      Stone and wood are appropriate as primary construction materials.
- GR D-7.6.2.3      Muted natural colors are important to help buildings in prominent locations blend in with the surrounding landscape.
- GR D-7.6.2.4      Avoid using multiple building materials and colors to prevent commonality and monotony of design.
- GR D-7.6.3        Require development on sites with more than one structure to employ similar, compatible, and complimentary architectural style, scale, form, color, use of materials, and detailing.
- GR D-7.6.4        Reduce the apparent scale of large commercial, civic, or industrial structures located adjacent to residential development through the use of techniques such as building placement, design, landscaping, and modulation of roof heights and scale. The use of architectural design features and scale reflective of rural residential building characteristics is highly encouraged.
- GR D-7.6.5        Employ designs that evoke a rural feeling including the use of natural materials, appropriate scaling, and bulk limitations.
- GR D-7.6.6        De-emphasize corporate logos or designs to better fit the rural character of the community.
- GR D-7.6.7        Employ a variety of measures to provide visual interest such as bas relief or mural-type artwork, water features, a mixture of building materials and coordinated colors, roof treatments, cornices, window treatments, landscaping, etc. Place special details or features on large blank walls visible from pedestrian walkways and parking areas.
- GR D-7.6.8        Locate or screen all mechanical or HVAC equipment, utility meters, electrical conduit, and any other exterior equipment to minimize visibility from public streets, building approaches, and adjacent properties.
- GR D-7.6.9        Provide pedestrian-friendly facades on the ground floor of all buildings that orient toward public streets, public spaces, and parking areas. Utilize pedestrian-scale lighting, signage, covered areas, and other amenities.

- GR D-7.6.10 Ensure that lighting within the overall development is appropriate to the architectural style and is consistently integrated.
- GR D-7.6.11 Encourage the preservation and integration of historic structures into the overall architectural design.
- GR D-7.6.12 Build arcades at the edge of buildings to provide shelter from sun and rain and to ease the transition between public and private space.

**GOAL GR D-8** Provide parking facilities that are adequate to meet the needs of local businesses while minimizing conflicts between automobiles and pedestrians.

- GR D-8.1 Ensure that there are clear indicators for internal intersections to maintain safety, including yield signs, stop lines/bars, and other methods to help direct traffic flow within parking areas.
- GR D-8.2 Minimize visual impacts of parking lots through the use of landscape islands and plant materials.
- GR D-8.3 Design parking lots to accommodate larger vehicles common to the rural areas.
- GR D-8.4 Utilize cut-off parking lot lighting to reduce glare.
- GR D-8.5 Encourage the use of permeable paving surfaces such as porous pavement for roads, driveways, and parking lots.
- GR D-8.6 Utilize bioretention areas within parking lot design.
- GR D-8.7 Ensure that parking lot design and circulation are appropriate to the rural scale of the surrounding area.
- GR D-8.8 Provide parking areas for horses, with amenities such as hitching posts to tether horses and water troughs, within very rural Rural Neighborhood Centers (RNCs).

**GOAL GR D-9** Improve the quality of development in the plan area by increasing pedestrian amenities.

- GR D-9.1 Pedestrian amenities include items such as benches or other seating areas, fountains, plazas, trash receptacles, small-scale lighting, artwork, etc.
- GR D-9.2 Pedestrian-oriented amenities should be located in and around commercial areas and community facilities.
- GR D-9.3 Provide covered entryways, walkways, roofs, or porch designs on storefronts and civic buildings to protect pedestrians from the rain.
- GR D-9.4 Require landscaping to be installed as a component of commercial, civic, and industrial developments.
  - GR D-9.4.1 Establish standards for the quantity and quality of landscaping around structures and within the parking lot, emphasizing the use of native plants.
  - GR D-9.4.2 Ensure sufficient and appropriate landscaping is provided to create a rural feel within the center.

- GR D-9.4.3 Provide incentives for retaining significant trees and mature vegetation in place of new landscaping.
- GR D-9.5 Utilize native plants within the landscape design.
- GR D-9.6 Design buildings on sites that have sloping topography to follow the natural terrain to minimize earth disturbance and integrate the building into the site.

## SIGNS

- GOAL GR D-10** Create sign standards that reduce the unnecessary visual clutter of signage within the community while promoting signage which successfully conveys information, advertises businesses, and reflects a positive image and rural character.
  - GR D-10.1 Design and locate signage to reflect the rural and historic character of the plan area.
    - GR D-10.1.1 Encourage the use of wall signs.
    - GR D-10.1.2 Limit the number and size of signs affixed to buildings.
    - GR D-10.1.3 Limit the number, size, and height of pole and monument signs.
    - GR D-10.1.4 Support Pierce County's ban on billboards.
    - GR D-10.1.5 Limit the quantity of temporary and vendor signs.
    - GR D-10.1.6 Avoid creating a continuous strip of commercial signs.
    - GR D-10.1.7 Create sign standards that are appropriate to the community's rural character.
    - GR D-10.1.8 Encourage the use of murals on the sides of commercial buildings that depict the rural or historic character of the plan area.
    - GR D-10.1.9 Limit the total amount of signage on each site (e.g., number of pole signs, monument signs, etc.).
    - GR D-10.1.10 Prohibit sign placement in public rights-of-way and on public utility poles.
    - GR D-10.1.11 Require consolidation of signage within commercial development to reduce visual clutter along streets and highways.
    - GR D-10.1.12 Eliminate the use of off-premise signs
  - GR D-10.2 Design signs with details that reflect a rural character.
    - GR D-10.2.1 Encourage the use of natural rock and other natural materials in monument signs, emphasizing craftsmanship, materials detailing, and an organic quality.
    - GR D-10.2.2 Encourage neutral colors that are appropriate to the existing context and character of the plan area.
    - GR D-10.2.3 Signs should have a rustic feel appropriate to the community's rural character.

- GR D-10.2.4 Prohibit the use of flashing, blinking, spinning, or rotating signs or objects; video signs; roof signs; railing signs; reader board signs; inflatable signs; and signs attached to private light standards.
- GR D-10.2.5 Prohibit signs that result in glare onto adjacent public streets or properties.
- GR D-10.2.6 Avoid large entryway and monument signs into residential subdivisions; instead, design these signs to blend with the rural and natural landscape.
- GR D-10.3 Maintain signs to be visually attractive and in good working order.
  - GR D-10.3.1 Signs should be kept in good repair.
  - GR D-10.3.2 Sign should be straight, clean, and without rust.
  - GR D-10.3.3 Faded signs should be replaced.
- GR D-10.4 Construct signage that accurately and adequately conveys information.
  - GR D-10.4.1 Construct signage at the entry points of the various communities within the plan area, including Elk Plain, Thrift, Whiskey Hollar, Kapowsin, Bethel Stop, Kirby, Rocky Ridge, and others to provide a sense of entry into the given community.
  - GR D-10.4.2 Improve the amount and quality of informational signage and implement directional signage at appropriate locations.
  - GR D-10.4.3 Improve animal warning signs where appropriate.
  - GR D-10.4.4 Signs should contain current information.
  - GR D-10.4.5 Signs should match the business.
- GR D-10.5 Enforce sign standards and encourage nonconforming signs to slowly come into compliance with new sign standards.
  - GR D-10.5.1 Encourage stricter enforcement of sign violations and abatement actions for dilapidated, abandoned, and illegal signs.
  - GR D-10.5.2 Ensure that temporary signs are removed promptly after the event or activity being advertised.
  - GR D-10.5.3 Promote the gradual reduction in the number of signs through the adoption of a sunset period for nonconforming signs.
  - GR D-10.5.4 Provide incentives to bring existing signs into conformance with new sign regulations.

## FISH/WILDLIFE HABITAT AND DEVELOPMENT

- GOAL GR D-11 Identify and retain key open space corridors to maintain connectivity and enhance wildlife movement.



- GR D-11.1 Cluster development to provide open space that is configured to protect wildlife habitat and promote wildlife movement for the broadest variety of species.
- GR D-11.2 Roadways should be designed and constructed in a manner that allows for movement of wildlife.
- GR D-11.3 Where wildlife poses a threat to major thoroughfares, consider implementing a motion detection system to increase human and animal safety.
- GR D-11.4 Roads, bridges, and culverts should be designed not to block or impede fish passage or to limit a stream's natural habitat or woody debris-forming processes (e.g., gravel or debris).

## VIEWSHEDS AND AESTHETICS

- GOAL GR D-12 Protect the visual qualities and resources of the plan area as vital components which comprise the area's special character and identity.
  - GR D-12.1 Protect views of Mount Rainier.
  - GR D-12.2 Preserve and protect existing views of mountain ranges and other scenic vistas as an integral part of the plan area's character.
  - GR D-12.3 Minimize tree removal to accommodate view creation; instead, encourage selective tree-limbing as necessary.
  - GR D-12.4 Work with public and private landowners to limit the visual impact of development on territorial views.
  - GR D-12.5 Remove illegally operating junkyards.
  - GR D-12.6 Require junkyards to be screened from the roadway.
  - GR D-12.7 Clean up all trash and debris along roadways, including junk vehicles.
  - GR D-12.8 Prioritize nuisance abatement at key entry points and corridors.
- GOAL GR D-13 Establish standards to ensure that fences maintain a rural character and protect the functions of the natural environment.
  - GR D-13.1 Construct fences of historical materials that are unobtrusive, and use locally available materials when possible.
  - GR D-13.2 Avoid fence types that have no historical precedent or are made from materials such as chain link, plastic, or vinyl.
  - GR D-13.3 Construct fences that are wildlife friendly.
  - GR D-13.4 Limit privacy fencing to areas immediately adjacent to a home.
- GOAL GR D-14 Preserve and protect significant foreground views along viewing platforms or passageways such as public gathering spaces and major roadways.

- GR D-14.1 Recognize SR 7, the Mountain Highway, as a scenic and recreational highway and pursue a similar designation for SR 161.
- GR D-14.2 Regulate uses and signage along designated scenic and recreational highways to control negative visual impacts along these scenic corridors.

## OPEN SPACE AND GREENBELTS

- GOAL GR D-15 Conserve and protect open space areas through the application of design standards.
- GR D-15.1 Apply environmentally sensitive design standards and techniques within open space corridors and the Rural Sensitive Resource (RSR) zoning designation, and consider uses that reduce impacts in the RSR zone.
  - GR D-15.1.1 Development within open space corridors and the RSR zoning designation shall utilize low impact development standards that address best management practices such as site development (clearing, grading, and tree removal), maximum impervious surface coverage, and minimum vegetation retention.
    - GR D-15.1.1.1 Any allowed non-residential uses, except school districts that utilize sustainable development methods, shall be required to use low impact development techniques.
    - GR D-15.1.1.2 At a minimum, low impact developments shall conform to the low impact development requirements outlined in the Pierce County Stormwater Management and Site Development Manual.
    - GR D-15.1.1.3 Low impact development tools that should be considered include minimizing soil disturbance and erosion, disconnecting constructed drainage courses, utilizing micro-detention facilities on each lot where feasible rather than one facility at the end of a conveyance system, and reducing/sharing parking facilities or using permeable pavement/pavers.
  - GR D-15.1.2 Vegetation and tree preservation shall be a priority on each site that is developed in the RSR designation.
  - GR D-15.1.3 Compatibility between the proposed use and designated open space tracts, as well as between adjacent uses, shall be maintained through techniques such as increased setbacks and screening utilizing native plant species.
  - GR D-15.1.4 All critical areas shall be set aside as a separate open space tract.
  - GR D-15.1.5 Consider clustering of lots, dwelling units, or building structures during the conceptual site development stage.
  - GR D-15.1.6 Integrate vehicle parking facilities into open space sites so that critical areas are not impacted and stormwater impacts are mitigated.
  - GR D-15.1.7 Design and place individual dwelling units and accessory dwelling units to avoid impacting the open space tract.

- GR D-15.1.8 Limit and locate lawn areas, driveways, and roads to result in the least disruption to the open space tract.
- GR D-15.1.9 Locate buildings and other structures such as fencing to protect the open space corridor. Individual structures shall not be placed where damage to the integrity of the open space tract and overall open space system is likely.
- GR D-15.1.10 Preservation of native vegetation (Douglas fir trees, Pacific madrone trees, Oregon white oak trees, etc.) shall be a priority on each site that is developed in an open space corridor or within the RSR designation.
- GR D-15.2 Require that any open space tracts (i.e., dedication area) be clearly marked and identified as a protected area through the use of fencing (when appropriate) and signage.
- GR D-15.3 Utilize open space sites as part of a nonmotorized trail system.
- GR D-15.4 Design and situation structures in designated open space areas so they are harmonious with their surroundings, constructed with natural materials, and well screened.
  - GR D-15.4.1 Utilize materials made of wood and stone or recycled products that look like these natural materials for benches, steps, railings, and fences.
- GR D-15.5 Encourage developers to utilize green building techniques to soften the urban environment within the open space network.
  - GR D-15.5.1 Reduce impervious surfaces by providing a layer of plants on hard surfaces to create a new network of vegetation, linking roofs, walls, courtyards, streets, and open spaces.
  - GR D-15.5.2 Design buildings to complement the open space network.
  - GR D-15.5.3 Utilize courtyards to provide green spaces for work or relaxation, to be cultivated as wildlife habitats, or organized as attractive green areas to offer pleasing views from the home or office window.
  - GR D-15.5.4 Design the outside space in conjunction with design of the building structure to integrate vegetation into the design of the building.
  - GR D-15.5.5 Promote the use of balconies and small terraces in multifamily developments.
  - GR D-15.5.6 Encourage the use of vegetated rooftops in greenbelt areas or in designated open space areas.
- GR D-15.6 Integrate public stormwater detention/retention facilities into the open space network to mimic the natural environment.
- GR D-15.7 Maintain compatibility between the proposed use and designated open space tracts, as well as between adjacent uses, through techniques such as increased setbacks and screening utilizing native plant species.

- GOAL GR D-16** Promote privately-owned greenbelts and passive recreational areas to supplement the public open space system within the community.
- GR D-16.1** Establish standards for the private dedication of greenbelts and passive recreational areas within new development.
  - GR D-16.2** The amount of dedicated greenbelts and passive recreational areas should be proportional to the scale and impact of a development proposal.
  - GR D-16.3** Determine dedication requirements based on the Pierce County Parks and Recreation Plan and other available documents, including published state and national guidelines and standards.
  - GR D-16.4** Utilize greenbelts as buffers between uses and as visual relief from the built environment.
  - GR D-16.5** Utilize greenbelts and passive recreational areas for pathways, and integrate this system into the nonmotorized transportation network.
  - GR D-16.6** Greenbelt and passive recreational areas should integrate or bridge critical areas, such as wetlands, fish and wildlife habitat areas, or designated open space areas when possible.

## IMPLEMENTING ACTIONS

The following list of actions needs to be completed in order to implement the policies contained within this plan. They are arranged according to the timeframe within which each should be completed: short, medium, or long term. Short-term actions should occur within one year of plan adoption. Mid-term actions should be completed within 2-5 years. Long-term actions should be completed within 5-10 years of plan adoption. The entity or entities responsible for leading the effort to complete the action item is listed in parenthesis following the action. Actions are assigned to the Land Use Advisory Commission (LUAC), Pierce County Planning and Land Services (PALS), Pierce County Economic Development (ED), Pierce County Parks and Recreations (Parks), Pierce County Public Works & Utilities (PWU), and Tacoma-Pierce County Health Department (TPCHD).

### SHORT TERM ACTIONS (UPON PLAN ADOPTION TO 1 YEAR)

1. Amend Title 18J, Design Standards and Guidelines to:
  - Establish site design standards and guidelines and a site plan review and approval process for all proposed commercial, civic and industrial development.
  - Establish architectural standards and guidelines and an architectural plan review and approval process for all proposed commercial, civic and industrial development.
  - Encourage the use of low impact development techniques as outlined in Chapter 10, Pierce County Stormwater Management Manual.
  - Establish maximum impervious surface standards and minimum native vegetation retention requirements.

- Prohibit clearing, grading, and vegetation removal, except for construction of roads and utilities, until building permits are issued.
  - Establish tree retention and reforestation requirements.
  - Provide for pedestrian amenities in proposed commercial, civic, industrial and residential development.
  - Establish design standards and guidelines for single-family and multifamily residential development to address site planning and building placement.
  - Establish architectural design standards and guidelines for single-family development in urban areas and multifamily residential development.
  - Establish design standards and guidelines for fencing. (PALS)
2. Amend Title 18B, Signs to establish sign standards and a sign review and approval process including:
    - Type and placement of signs.
    - Design details.
    - Sign maintenance.
    - Conveyance of information.
    - Nonconforming signs. (PALS)
  3. Adopt an inventory of cultural and historic resources within the plan area that are significant for preservation, protection, or restoration efforts. These resources may include buildings, roads, sites, or districts within communities. (PALS)
  4. Review Pierce County land use applications to determine if historic and cultural resources are listed for consideration. Amend as necessary to include this as a review item. (PALS)

## MID-TERM ACTIONS (1-5 YEARS)

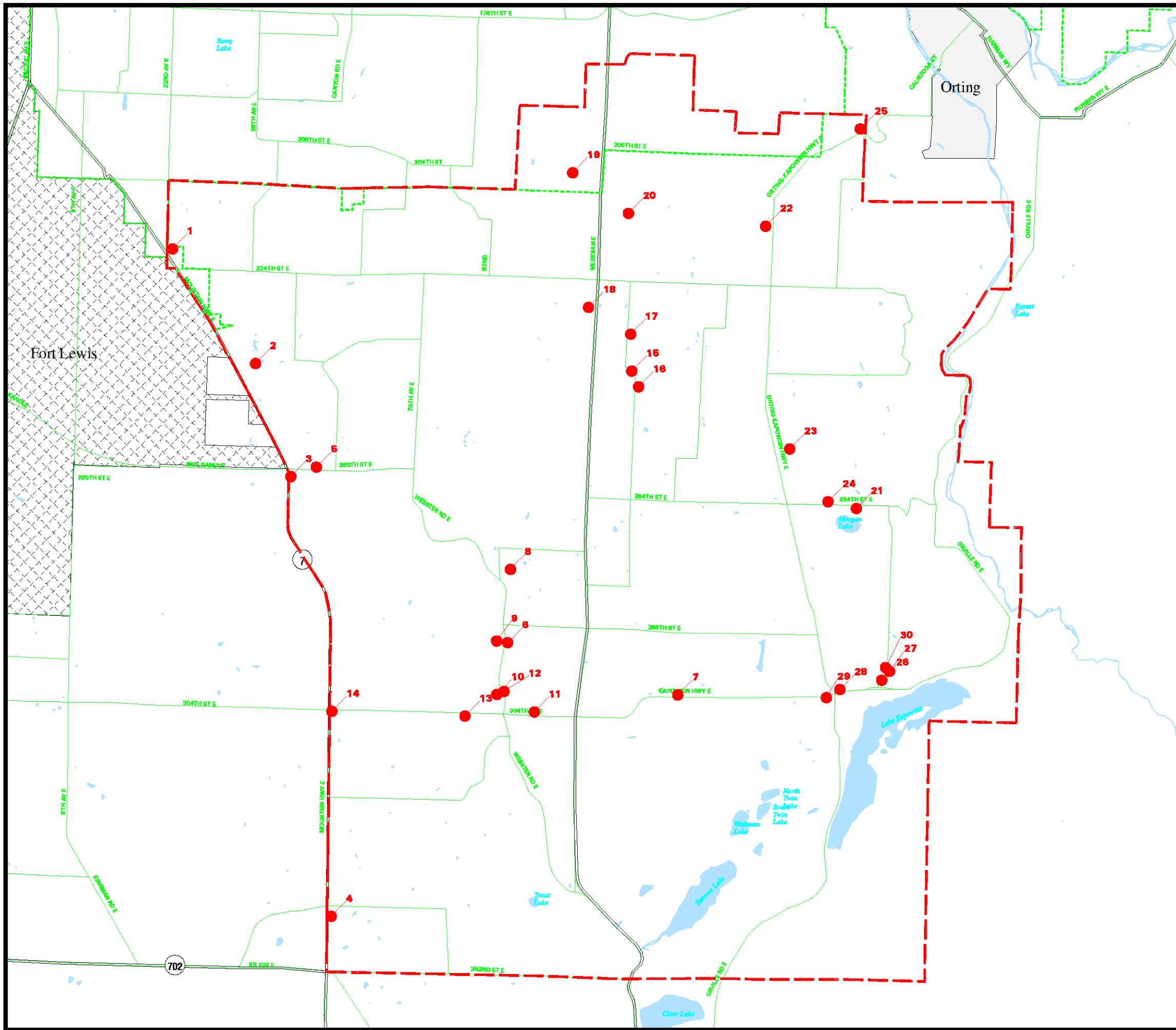
1. Establish a Historic Preservation society for the communities within the plan area. The preservation society may:
  - Initiate special events to promote the history within the plan area.
  - Conduct fundraising activities to raise monies to preserve historic or cultural resources.
  - Engage in restoration actions for historic or cultural resources.
  - Work with individual property owners of historic or cultural resources to encourage preservation or restoration actions.
  - Establish signage for historic or cultural resources. (PALS, LUAC)
2. Work with Pierce Transit to increase transit service within the plan area. (PWU, LUAC)
3. Amend Title 18A, Zoning cottage industry standards to:
  - Create separate categories and requirements for urban and rural levels of development.
  - Provide adequate screening between cottage industries and residential dwellings.



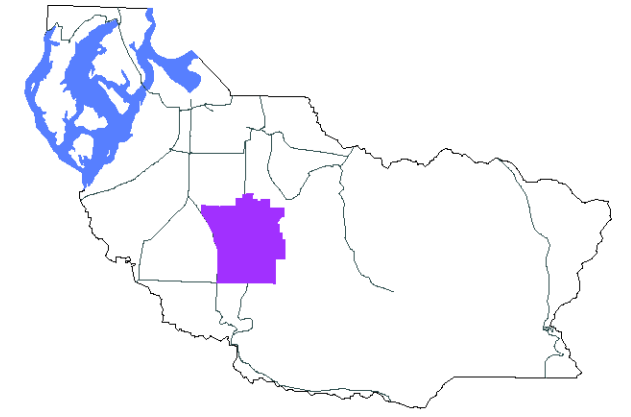
- Establish buffer requirements between proposed developments and adjacent streets.
  - Require a conditional use permit for the construction of new private wireless communication facilities. (PALS)
4. Amend Title 18J, Design Standards and Guidelines to:
    - Establish viewshed guidelines.
    - Develop design standards and guidelines for wireless communication facilities. (PALS)
  5. Develop a preferred master conceptual plan for development of RACs and RNCs throughout the plan area. (PALS)

#### LONG TERM ACTIONS (5-10 YEARS)

1. The Graham Advisory Commission should work with the Pierce County Responds Program to clean up all trash, junk, and debris within the plan area. (PALS)





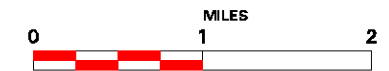
## Pierce County, Washington



## Historic Resources

- |                           |                         |
|---------------------------|-------------------------|
| 1 Elk Plain School        | 16 House                |
| 2 House                   | 17 Graham School        |
| 3 Jacobson House          | 18 House                |
| 4 Weyerhauser School      | 19 Outbuilding          |
| 5 Rocky Ridge School      | 20 Farm (Remains)       |
| 6 Log House               | 21 House                |
| 7 J. Richardson House     | 22 House                |
| 8 House & Outbuildings    | 23 House                |
| 9 Farm                    | 24 House                |
| 10 Barn                   | 25 Orting Cemetery      |
| 11 Assembly of God Church | 26 Kapowsin Post Office |
| 12 Benston School         | 27 House                |
| 13 Benston Grange #892    | 28 Store Building       |
| 14 Johnson's Corner       | 29 Kapowsin Grange #804 |
| 15 Log House              | 30 School               |

-  Comp. Urban Growth Area Boundary
-  Graham Community Plan Boundary



Department of Planning and Land Services

Plot Date: November 28, 2005

# Graham Community Plan

# Chapter 4: Natural Environment Element

## INTRODUCTION



*Morse Wildlife Preserve – Bird Banding July 2003*

This is a time of extraordinary environmental change. All around the region, country and world, natural landscapes continue to be reduced and fragmented. Essential relationships within ecosystems are different than they were even just a century ago. At a local level, the recent listing of Chinook salmon as a threatened species under the Federal Endangered Species Act is indicative of this plight.

The types and intensity of human population, activities, development and resource use alter natural systems. Fortunately, many people are working towards shifting paradigms and priorities to make some effective changes in the human interaction with the natural environment. The Natural Environment Element addresses desired changes to protect and conserve natural environment resources such as air, soils, vegetation, water, and fish and wildlife species found within the community plan area.

## DESCRIPTION OF CURRENT CONDITIONS

During the last several decades, the greater Graham area of Pierce County has experienced urban levels of growth, primarily in the northern portion of the plan area. Rural resource industries such as agriculture, forestry, and mineral extraction have also been conducted within the plan area. Both types of human activities have impacted natural systems. Some of the plan area still retains a rural residential or undeveloped character and, as a result, has incurred fewer negative impacts to the natural environment than the more urban portions of the County.

Knowledge about the condition of each component of the natural environment is important to understanding the functioning of the whole ecosystem. Therefore, each particular resource (air, earth, water, fish and wildlife) warrants a more detailed discussion. Open space is also discussed here as it relates to the natural environment.

## AIR RESOURCES

The region's air quality is highly influenced by the Pacific Ocean, westerly wind patterns, and two mountain ranges. The typical airflow within the region is westerly winds coming from the Pacific Ocean. Most of the time, this airflow provides wind-driven mixing, which effectively disperses air pollutants. However, air inversions can occur resulting in stagnation and increased pollution levels. This condition is exacerbated by the Olympic Mountains to the west and the

Cascade Mountain range to the east, that form the sides of a bowl, which helps trap air pollution within the urban basin. During times of air inversions, air pollution will continue to accumulate until the weather pattern changes.

Most of the air pollution within the Puget Sound region comes from urban development, emissions from motor vehicles, wood burning and industrial activities. The Puget Sound Clean Air Agency (PSCAA), in cooperation with the Washington State Department of Ecology (DOE), monitors air quality in a four-county region (Snohomish, King, Pierce, and Kitsap) for compliance with federally established standards. Air quality within the Puget Sound region is currently classified as meeting federal standards. The PSCAA's Air Quality Index, generally rates air quality between good to moderate.

The Graham Community Plan area is part of the Puget Sound airshed. Air quality within the plan area is generally consistent with that of the greater Puget Sound region. However, the plan area does experience some localized air quality problems. Gravel roads, development sites, and some recreational activities cause dust emissions. Some natural resource industries such as dairy farms and natural resource based industries like plywood mills can emit unpleasant odors. Illegal burning in barrels or slash burns and use of uncertified fireplaces and wood stoves may increase particulate matter. There are also concerns about the impact to air quality from idling freight trains, the 304th Street landfill, and businesses in the Frederickson Employment Center.

## EARTH RESOURCES

### SOILS

Soil types determine the ability of the ground to absorb rainfall and dictate appropriate levels and types of development. Pierce County Surface Water Management classifies soil types into hydrologic soil groups A through D. Classifications range from low runoff potential with high infiltration capacity (group A) to high runoff potential with low infiltration capacity (group D). Group A and B soils typically include sandy loam soil types such as Spanaway gravelly sandy loam, while Kapowsin gravelly loam is an example of a group D soil. These soil groups become indicators of which areas are more susceptible to surface water runoff, flooding, and groundwater recharge problems. For example, soils with high infiltration capacity can result in insufficient filtration of runoff pollutants. This may correlate to inadequate protection of groundwater quality. The poor draining soil types contribute to septic failure and quick surface runoff that creates flooding, even during smaller storm events.

The soils found within the plan area range from the extremes of well draining to poorly draining soil groups. The northwest corner of the plan area contains soils that generally are well drained. This soil group tends to become dry and droughty during the summer and early fall. The primary historic land cover types are prairies and savannahs, though this soil can also support woodlands. The rest of the plan area mostly contains soils that generally are poorly drained and typically support conifer forests and wetlands. (See Map F-22: Soils and Map F-23: Hydrologic Soil Groups)

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## LANDSLIDE AND EROSION HAZARD AREAS

Landslide areas are those lands subject to risk of mass movement. Erosion hazard areas may be vulnerable to retreat, sloughing or calving, or movement of sediments. This type of land movement is caused by a combination of geologic, topographic, and hydrologic factors such as soil composition and texture, vegetation cover, and rainfall patterns. Landslide and erosion hazard areas may potentially cause damage to structures and in extreme cases, loss of life during a severe event. About 15% of the plan area contains a designated landslide hazard or erosion hazard area. These areas are primarily located in the Rocky Ridge area and the Orting Valley Ridge. (See Map F-24: Potential Landslide Hazard Areas and Map F-25: Potential Erosion Hazard Areas)

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## SEISMIC HAZARD AREAS

Seismic hazard areas are prone to earthquake-induced landsliding, groundshaking, dynamic settlements or soil liquefaction. Structures within these areas are subject to severe risk of damage. Approximately 10% of the plan area contains soils that have the potential for liquefaction and/or dynamic settlement during a seismic (earthquake) event. These areas are primarily located in the Ohop and Orting valleys and along stream corridors such as Muck Creek and South Creek. (See Map F-26: Potential Seismic Hazard Areas)

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## VOLCANIC HAZARD AREAS

Volcanic hazard areas are subject to inundation by pyroclastic flows, mud and debris flows (lahars), or related flooding caused by a geologic or volcanic event on Mount Rainier. Potential hazard zones are typically located close to the mountain or within major riverine areas. The eastern portion of the plan area, in the Puyallup River Valley, lies within a designated volcanic hazard area. (See Map F-27: Volcanic Hazard Areas)

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## VEGETATION

The historic plant communities within the majority of the plan area were mixed woodlands (hardwoods and conifers ranging from early to late seral stage), with the exception of the northwest portion of the plan area which contained prairies, savannahs, and oak woodlands. Prior to European settlement of this area, the local Native Americans induced periodic fires that prevented the prairies and savannahs from developing into a dense forest cover. At this time, the plan area contains a mixture of pasture grasses, agricultural crops, native grasslands and prairies, wetlands, and a mixture of lowland conifer forests and hardwood/shrubs.

The Washington Department of Natural Resources provides information on tree coverage and categorizes this information based upon the seral stage of the tree stands (late, mid, or early) or non-forested areas (urban, agricultural, rangeland, barren, glaciers). Late seral indicates old growth forests while early seral would signify early growth reforestation areas. The majority of tree stands within the plan area are a mixture of conifer and hardwood forests classified as early seral stage. A small amount of tree canopy cover is designated as late seral stage. A large portion of the plan area is designated as non-forested, reflective of urban and agricultural development patterns. (See Map F-28: 1991 Classified Canopy Cover)





*Prairie and Oak Habitat*

In 1999, the Washington Department of Natural Resources (WDNR), in conjunction with the U.S. Fish and Wildlife Service and Tahoma Audubon, completed a survey of oak stands in Pierce County greater than one acre in size. This survey did not indicate any oak stands meeting the above criterion within the plan area; however, oaks stands and trees do exist in the plan area as identified in the prairie inventory described below and by area residents. Other

significant tree species within the plan area worth noting are the Pacific Yew, Pacific Madrone, and the Ponderosa Pine. These species tend to be slow-growing and susceptible to impacts from adjacent development.

In the summer of 2003, Pierce County commissioned a survey to identify the location of potential prairies within the plan area. These areas were identified using information on soils that support prairie plant species (Everett gravelly sandy loam and Spanaway gravelly sandy loam series) and field verification of native prairie indicator plant and tree species such as camas, kinnikinnik, field chickweed, Idaho fescue, wooly sunflower, blue-leaf fescue, two-color lupine, Western buttercups and Oregon White Oak trees. Prairie areas are generally located in the northwestern and western portions of the plan area. (See Map F-29: Prairie Inventory/Soils)

Wetland vegetation is scattered throughout the plan area and is discussed in greater detail under the Water Resources section below.

## WATER RESOURCES

### WATER RESOURCE INVENTORY AREAS (WRIAs) AND WATERSHED BASINS

Water Resource Inventory Areas (WRIAs) are watershed planning units established by Washington State. Pierce County has further divided these WRIAs into 26 watershed basins. The plan area contains three WRIAs and five watershed basins. The Nisqually WRIA (Mid-Nisqually River, Muck Creek, and Ohop Creek watershed basins) is located in the central and southern portion of the plan area. The largest basin, Muck Creek, encompasses approximately 53% of the plan area. The Tacoma WRIA (Clover Creek/ Steilacoom watershed basin) is located in the northwest portion of the plan area. The Puyallup WRIA (Upper Puyallup River and Mid-Puyallup River basins) runs the length of the eastern portion of the plan area. (See Table F-15 and Map F-30: Watersheds)

**Table F-15: WRIAs & Basins**

WRIA/Basin	Number of Acres	Percentage of Plan Area
<b>Tacoma Watershed</b>	<b>5,180.03</b>	<b>10.58%</b>
<i>Clover Creek Basin</i>	<i>5,180.03</i>	<i>10.58%</i>
<b>Puyallup Watershed</b>	<b>12,455.97</b>	<b>25.45%</b>

WRIA/Basin	Number of Acres	Percentage of Plan Area
<i>Upper-Puyallup River Basin</i>	7,684.08	15.70%
<i>Mid-Puyallup River Basin</i>	4,771.89	9.75%
<b>Nisqually Watershed</b>	<b>31,313.03</b>	<b>63.97%</b>
<i>Mid-Nisqually River Basin</i>	4,834.20	9.88%
<i>Muck Creek Basin</i>	25,891.79	52.90%
<i>Ohop Creek Basin</i>	587.04	1.20%

Pierce County Water Programs Division has completed plans for the Clover Creek and Muck Creek basins. A plan for the Mid Puyallup River Basin is under development. Basin plans analyze the existing hydrologic and habitat systems and address the impacts of current and proposed land use development on surface water runoff, capital improvement projects, and habitat degradation. Both the Muck Creek and the Clover Creek Basin Plans discuss the basin boundary between the two basins. Because the basin boundaries are delineated by surface topography they do not necessarily represent the total amount of water that may be entering a basin due to groundwater. The groundwater contributing areas are much more difficult to delineate but both plans recommend some additional study to attempt to map the contributing areas and determine which basin the infiltrated water goes into.

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## SURFACE WATER RUNOFF AND FLOODING

### FLOOD HAZARD AREAS

Pierce County regulates FEMA floodways, A zones (100-year floodplain) and B zones (500-year floodplain) as flood hazard areas. In addition to the FEMA designated floodways and floodplains, some pothole areas and areas of fast moving water (deep and/or fast flowing water) are also regulated as flood hazard areas. These areas are typically associated with rivers and streams, lands adjacent to marine waters, and depressional areas. Map F-31: Potential Flood Hazard Areas depicts where these flood hazards are located within the plan area.

### SURFACE WATER FLOODING

As forested and natural vegetative cover is replaced with development, surface water runoff (stormwater) tends to increase both in volume and rate of runoff. Historically, rainfall would be utilized in forest evapotranspiration processes or stay on a site trapped in numerous small depressions, saturating the top several feet of soil. Flooding would only occur during larger storm events when the vegetation and soil was completely saturated. As development has occurred, vegetation has been removed and many of the small depressions were graded smooth, with the top several feet of soil removed or compacted. This type of development removed the ability of the land to contain the smaller storm events and subsequently flooding started to become a problem at even the smaller events, particularly in areas underlain by Type C or D soils. Increases in the number and capacity of connected drainage systems, in the form of ditches and pipes intended to drain properties and remove water quickly, also increase stormwater problems downstream.

Stormwater, that has not been properly addressed, can also result in water quality and habitat degradation, negative impacts to fisheries, and erosion. Stormwater related problems can be correlated to the amount of impervious surface within a watershed or basin. Recently published research indicates that water quality problems and habitat degradation start occurring when a watershed reaches approximately 10% effective impervious surface. This percentage can be reached with a density of as little as one home per acre because of the network of roads needed to support this type of development.

#### FLOODING PROBLEMS IN THE PLAN AREA

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Most flooding within the Muck Creek Basin is localized and many of the flooding complaints received by the County occurred during the major storm events of 1996 and 1997. There is some regional flooding near 224th St. E. and Meridian. Stormwater in that area ends up on a vacant lot behind the shopping center and during large storm events the water has flowed south to an adjoining mobile home park. Some of the stormwater from the site flows west, and infiltrates into the ground. It is thought to emerge to the north, in the Clover Creek Basin. A regional infiltration pond has been proposed as a potential solution, subject to the results of additional studies. It appears that the majority of the flooding issues within the plan area are the result of undersized culverts. The Muck Creek Basin Plan proposes eight culvert improvements within the plan area, and improvements to one road. A small infiltration pond has been suggested to address localized flooding at 242nd St. E., near 49th Ave. E. At the southeast corner of the plan area, several homes experience flooding from runoff at Mountain Highway, near 340th St. E. A flow splitter has been proposed there to redirect stormwater.

Several minor areas of flooding have been reported in the Horsehaven Creek sub-basin of the Mid-Puyallup basin. Several private culverts conveying Horsehaven Creek under driveways do not appear to be large enough to convey estimated future flows and backwater pooling of the creek onto these properties and around the Orting-Kapowsin Highway culvert may occur if storm flows are not retained during major storm events. The Mid-Puyallup River Basin planning process is looking into alternatives to ameliorate future flooding and the erosive effects of urban stormwater flows in these areas.

Flooding problems identified in the Clover Creek Basin Plan typically occur at the transition point where ephemeral channels drain onto the lower outwash soils where typically the runoff quickly infiltrates. When these transition areas are encroached upon by development there can be inadequate area left to infiltrate the runoff coming from the ephemeral channel. This problem occurs at 224th St. E. and 46th Ave. E. where new residential development has occurred at a transition area. Another potential problem area is just west of 224th St. E. and Meridian Ave. where a transition area is zoned as Rural Activity Center. Significant flooding also occurs along a low crescent-shaped channel known as the Kirby Channel near Eustis Hunt Road. This flooding is associated with the local groundwater level, which can rise and fall based on cumulative annual rainfall.

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## GROUNDWATER

The groundwater aquifers within Pierce County supply drinking water for over 270,000 residents and, for more than 170,000 of these residents, the aquifers serve as the sole source of drinking water. The entire plan area is underlain by a sole source aquifer. The Clover/Chambers Creek Aquifer system is located in the northwest portion of the plan area and this area also contains some areas identified as DRASTIC zones. Approximately 10% of the plan area is designated as a Wellhead Protection Area. The depth of groundwater in the plan area ranges from one to more than 100 feet. (See Map F-32: Aquifer Recharge Areas). See the Facilities and Services Element for a more detailed discussion on drinking water supplies.

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## WATER QUALITY

Water quality measurements include sediment, temperature, oxygen levels, bacteria, minerals, and chemicals. Threats to water quality come from a variety of everyday sources such as agriculture (livestock in and near streams), forest practices, failing septic systems, stormwater, construction activities, recreation (boats and marinas), road runoff, and residential, commercial and industrial activities. These sources are often referred to as “nonpoint” sources of pollution. Point sources of pollution include businesses and sewage treatment plants, which directly discharge into salt or freshwater. Given the rural character of the plan area, it is probable that the majority of water quality problems are attributable to nonpoint sources of pollution.

The primary data used to assess groundwater quality is provided by U.S. Geological Survey, Washington Department of Health (WDOH), Tacoma-Pierce County Health Department (TPCHD), and water purveyor sampling information. In terms of meeting drinking water standards, the groundwater quality within the Muck Creek Basin appears to be good. All local well samples, except one (351st Street Well Association) fell below the state standards. Groundwater within the Chambers/Clover Creek basin varies substantially, depending on soil permeability and aquifer depth. The northwest portion of the plan area, particularly along SR 7, is susceptible to groundwater contamination due to permeable surface material and lack of confining hydrogeologic units that protect deep aquifers. Water quality data demonstrate higher nitrate and chloride levels in this area. For example, a cluster of wells in the Spanaway area tested high in nitrate, which is probably the result of septic systems that rapidly drain effluent in the shallow aquifer system.

Within the Muck Creek Basin dissolved oxygen, summer stream temperatures, and fecal coliform levels seem to be problems and testing results in upper Muck Creek often fail to meet state standards for these measurements. The dissolved oxygen levels are low but not low enough to typically cause mortality to fish. However, the temperature has been recorded within the lethal range for fish and is most likely caused by lack of riparian shade. The high fecal coliform levels are related to surrounding agricultural uses.

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## SHORELINES

The Pierce County Shoreline Management Program (SMP) was adopted in two phases; in 1974 and 1975. Since then a limited number of amendments to the SMP have been adopted. Over the last three decades conditions in shoreline areas have changed considerably as the

community has grown. Scientific understanding of natural systems and processes has also evolved. It is now time to conduct a comprehensive review and update to the SMP to reflect current conditions, scientific information regarding shoreline habitats and processes, and public attitudes toward managing shoreline resources.



*Lake Kapowsin*

The Washington State Shoreline Management Act (SMA) provides for the management of water bodies or watercourses identified as “Shorelines of the State.” Areas under jurisdiction of the SMA include the water body/course, all lands within 200 feet of the ordinary high water mark, and associated wetlands and floodplains. In the plan area this classification is applied to Lake Kapowsin, Tanwax Lake, Whitman Lake, Morgan Lake, Ohop Creek, Kapowsin Creek, and the Puyallup River and a portion of South Creek.

Shorelines of the state are designated into five types of environments including Urban, Residential Rural, Rural, Conservancy, and Natural. These environments are similar to zoning designations allowing different land uses, densities and activities ranging from the most intensive uses (Urban) to very limited uses (Natural). The Residential Rural designation is the most intensive allowed within the plan area (single family and some commercial) and is applied to Whitman Lake and the majority of Tanwax Lake. South Creek, Morgan Lake, a portion of Kapowsin Creek and a portion of the Puyallup River are designated as Rural, which allows low density residential and intensive recreational and agricultural uses. The Conservancy designation, allowing outdoor recreation and low intensity agricultural and forestry uses, encompasses all of Lake Kapowsin and Ohop Creek and a portion of Kapowsin Creek and the Puyallup River. Only a small portion of Kapowsin Creek is designated as Natural. The Natural Environment establishes very limited uses that typically require approval of a conditional use permit. (See Map F-33: Shoreline Environments)

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## WETLANDS

Wetlands are legally protected under the Federal Clean Water Act, the State Growth Management Act, and Pierce County Codes. Wetlands are identified by the presence of water during the growing season, hydric soils, and the presence of a plant community that is able to tolerate prolonged soil saturation. These special land areas provide many important environmental functions including: reducing the impact or frequency of flooding, providing habitat, recharging aquifers, providing clean water for fish and other aquatic species, and preventing shoreline erosion. Wetlands also provide visual buffers in the built landscape.

The plan area currently contains both isolated wetlands and wetlands which are adjacent to creeks and the lakes. In addition, there is a strong correlation between designated flood hazard areas and wetlands. Many of the scattered wetlands in the plan area are elongated troughs that are the result of underlying Dupont Muck soils, which formed when the glaciers receded.



Some of these wetlands are bogs that formed as pre-historic lakes, which have filled in over time. (See Map F-34: County Wetland Inventory)

## FISH AND WILDLIFE RESOURCES

Pierce County regulates critical fish and wildlife species and their associated habitats. Critical fish and wildlife species are either federally or state-listed as endangered, threatened, sensitive, candidate, or monitored. Associated habitats may be identified by either point locations (such as a nest or den) or by broader habitats that support some stage of the species life-cycle (such as oak woodlands or river systems). All anadromous fish species are considered critical because of the recent listing of the Chinook salmon and bull trout under the Federal Endangered Species Act (ESA) and the importance of these species to the various indigenous Native American Tribes throughout the region.

### FISH SPECIES AND HABITAT AREAS

#### ANADROMOUS FISH AND HABITAT

Eight anadromous fish species are identified on the revised Washington State Department of Fish and Wildlife (WDFW) StreamNet Maps as known and/or predicted to occur within the plan area. (See Map F-35: Fish and Wildlife Resources). The location, status, origin and type, spawning, and ESA listing information for each anadromous fish species within the plan area is depicted in Table F-16.

**Table F-16: Anadromous Fish Species**

Species	SaSI Stock*	Status	Origin and Type	Spawning
<b>Coho Salmon</b>				
Muck Creek	Nisqually	Healthy	Mixed, Composite	mid-Nov – mid-Jan or later
South Creek	Nisqually	Healthy	Mixed, Composite	mid-Nov – mid-Jan or later
Tanwax Creek/ Lake	Nisqually	Healthy	Mixed, Composite	mid-Nov – mid-Jan or later
Ohop Creek	Nisqually	Healthy	Mixed, Composite	mid-Nov – mid-Jan or later
Kapowsin Lake	Puyallup	Healthy	Mixed, Composite	mid-Oct – Jan (can be Mar)
Kapowsin Creek	Puyallup	Healthy	Mixed, Composite	mid-Oct – Jan (can be Mar)
Puyallup River	Puyallup	Healthy	Mixed, Composite	mid-Oct – Jan (can be Mar)
<b>Steelhead Trout</b>				
Ohop Creek	Nisqually Winter	Depressed	Native, Wild	Mar – mid-June

Species	SaSI Stock*	Status	Origin and Type	Spawning
Kapowsin Lake	Mainstem Puyallup Winter	Depressed	Native, Wild	Mar – mid-June
Kapowsin Creek	Mainstem Puyallup Winter	Depressed	Native, Wild	Mar – mid-June
Puyallup River	Mainstem Puyallup Winter	Depressed	Native, Wild	Mar – mid-June
<b>Chinook Salmon**</b>				
Kapowsin Creek	Puyallup	Unknown	Mixed, Composite	mid-Sept – early Nov
Puyallup River	Puyallup	Unknown	Mixed, Composite	mid-Sept – early Nov
<b>Chum Salmon</b>				
Muck Creek	Nisqually Winter	Healthy	Native, Wild	Jan – early Mar
Kapowsin Creek	Puyallup/Carbon Fall	Healthy	Native, Wild	Dec – Jan
Puyallup River	Puyallup/Carbon Fall	Healthy	Native, Wild	Dec – Jan
<b>Pink Salmon</b>				
Kapowsin Creek	Puyallup	Depressed	Native, Wild	Sept – Oct
Puyallup River	Puyallup	Depressed	Native, Wild	Sept – Oct
<b>Sockeye Salmon</b>				
Kapowsin Creek	These fish are part of a coast-wide riverine population not yet characterized in WA.	Unknown	Unknown	Unknown
Puyallup River		Unknown	Unknown	Unknown
<b>Cutthroat Trout</b>				
Kapowsin Creek	Puyallup	Unknown	Native, Wild	Jan – Mid-June
Puyallup River	Puyallup	Unknown	Native, Wild	Jan – Mid-June
<b>Bull Trout/Dolly Varden***</b>				
Puyallup River	Puyallup	Unknown	Native, Wild	Spawn timing in both systems is unknown but would occur in the autumn
Kapowsin Creek	Puyallup	Unknown	Native, Wild	

\* Information from the 2002 draft Washington State Salmon & Steelhead Stock Inventory (SaSI), WDFW and from interviews with WDFW staff.

\*\* Chinook Salmon and Bull Trout/Dolly Varden are listed as Threatened under the Endangered Species Act.

\*\*\* Bull Trout/Dolly Varden (WDFW has not done enough genetic analysis to determine if the basins contain one species of native char or both, and they're difficult to distinguish, except by genetic analysis). Both have anadromous life history forms. Cutthroats were rated in 2000, and Bull Trout/Dolly Varden in 1998.

The status of the fish species within the plan area, where known, ranges from healthy to depressed. Both steelhead and pink salmon are depressed in each system and two anadromous fish species, Chinook salmon and bull trout/Dolly Varden, are listed as threatened under the Endangered Species Act. Most of these species are wild, natives, with the exception of Coho and Chinook, which are of mixed hatchery origin.



*Muck Creek*

Conditions that affect fish habitat quality along Muck Creek include fish passage barriers, invasive reed canary grass, sedimentation, lack of large woody debris (LWD), and low stream flows. Muck Creek and its seven major tributaries have barriers to upstream fish migration within one mile of the mouth. Sedimentation of the channel bed is most apparent downstream of cattle and horse ranches, where livestock is allowed unrestricted access into the creek. The creek is generally devoid of LWD, which is apparently

being removed from stream channels by local residents. As a result, channel complexity is generally poor and pool abundance and quality is low. Reed canary grass also thrives where riparian areas lack proper shading from a well vegetated riparian corridor. The relatively late timing of the Coho and chum runs in the Muck Creek system suggests that the fish that utilize the creek for spawning have been influenced by the intermittent stream flow condition and have timed their runs to coincide with higher water levels that allow passage through the reach above Roy. While Coho may be able to hold in the Nisqually River until stream flows increase this does not favor late arriving fish. Coho have not been seen in Muck Creek for several years which impairs further analysis.

#### NON-ANADROMOUS FISH AND HABITAT

The Washington Department of Fish and Wildlife Priority Habitats & Species (PHS) dataset identifies 11 non-anadromous fish species within the plan area. Table F-17 provides a detailed list of these species and the state and federal status.

**Table F-17: Non-Anadromous Fish Species**

Species	State Status	Federal Status
Olympic Mudminnow	Ss - Sensitive	
Longnose Dace		
Speckled Dace		
Redside Shiner		
Three-Spine Stickleback		
Shorthead Sculpin		
Coastrange Sculpin		
Prickly Sculpin		
Reticulate Sculpin	Sm – Monitored	
Torrent Sculpin		
Riffle Sculpin	Sm – Monitored	

Three of the 11 non-anadromous fish species are state listed as either sensitive or monitored. None of species are federally-listed.

#### WILDLIFE SPECIES AND HABITAT AREAS

Wildlife species depend on a variety of habitat types to support their life cycles, including wetlands, riparian areas, prairies and oak woodlands, and coniferous forests. Priority wildlife habitat and species locations have been mapped by the Washington State Department of Fish and Wildlife (WDFW) and are identified in WDFW's Priority Habitat and Species Database. This database indicates a variety of wildlife species and habitats within the plan area (see Map F-35: Fish and Wildlife Resources). The name, primary habitat, and state/federal listing status for each potential wildlife species within the plan area is depicted in Table F-18.

**Table F-18: Potential Critical Wildlife Species**

Common Name*	Primary Habitat	State Status	Federal Status
<b>Herps</b>			
Oregon Spotted Frog	Marshes and marshy edges of ponds, streams, lakes and flooded fields.	Se – Endangered	Fe – Endangered
Tailed Frog	Usually clear, cold swift-flowing mountain streams; sometimes found near water in damp forests or in more open areas in cold, wet weather. Small channels without fish and with shading plants and trees are favorite locations. Usually found in streams with large stones, cobbles, and stable boulders.	Sm – Monitored	Fco – Species of Concern
Western Pond Turtle	Marshes, ponds, sloughs, small lakes, gravel pits, reservoirs, stock ponds, sewage treatment plants.	Se – Endangered	Fco – Species of Concern
<b>Birds</b>			
Common Loon	Breed on larger lakes (>12 ha) in forested areas and nest on shorelines of islands and the mainland.	Ss – Sensitive	
Bald Eagle	Nesting habitat consists of upland woodlands and lowland riparian stands with a mature conifer or hardwood component. A variety of tree species, both alive and dead, are used for perching. Communal roost stands are generally uneven-aged with a multi-layered canopy, often on leeward-facing hillsides or in valleys.	St – Threatened	Ft – Threatened
Osprey	Nesting habitat is on shorelines or in close proximity to open water. Nest trees are dominant live conifers or snags.	Sm – Monitored	

Common Name*	Primary Habitat	State Status	Federal Status
Mountain Quail	Mixed evergreen-deciduous forests, regenerating clear-cuts, forest and meadow edges, chaparral slopes, shrub-steppe, and mixed forest/shrub areas, characteristically in overgrown brushy areas.		
Great Blue Heron	Fresh and saltwater wetlands including seashores, rivers, swamps, marshes, and ditches. Nest in a variety of deciduous and evergreen tree species. Nests are usually constructed in the tallest trees available.	Sm – Monitored	
Band-Tailed Pigeon	Coniferous and deciduous timber stands containing berry- and nut-producing trees and shrubs. Breed in mixed conifer and hardwood forests interspersed with younger wooded areas or small fields. Mineral salts sites are necessary during egg laying and are found at mineral springs and marine shorelines.		
Purple Martin	Nest in artificial structures near cities and towns in the lowlands of western Washington. Historically, they bred in old woodpecker cavities in large dead trees (snags).	Sc – Candidate	
Western Bluebird	Open fields with one or two large oak trees, pastures, vineyards, old orchards or large mowed yards with selected medium-sized trees.	Sm – Monitored	
Oregon Vesper Sparrow	Pastures, hayfields, and along the edges of cultivated fields where hedgerows, scattered trees, power lines, or other tall structures are located. Also found in fallow fields in early stages of succession, gravel pits, golf courses, young pine plantations, open disturbed woodlots, and reclaimed strip mines.	Sc – Candidate	Fco – Species of Concern
Streaked Horned Lark	Grasslands and prairies.	Sc – Candidate	Fco – Species of Concern
<b>Mammals</b>			
Pacific Water Shrew	Streams, bogs, wetlands and riparian areas.	Sm – Monitored	
Western Gray Squirrel	Prairies and Oak Savannahs.	St – Threatened	Fco – Species of Concern



Common Name*	Primary Habitat	State Status	Federal Status
Fisher	Dense coniferous and mixed coniferous/deciduous forest with extensive, continuous canopy (mature to old growth stands preferred) Winter habitat includes mixed conifer/hardwood stands with 50-90% over story composed of evergreen trees. Riparian areas, ridgelines, and lakeshores located in and adjacent to forest are used for foraging and movement.	Se – Endangered	Fco – Species of Concern

\*Information from the WDFW PHS and Wildlife Heritage databases.

The majority of critical wildlife species within the plan area are either state-listed or federally-listed. The Oregon spotted frog, Western pond turtle, and fisher are listed as endangered and the Western gray squirrel and bald eagle are listed as threatened by Washington State. Both the Oregon spotted frog and bald eagle also contain the same federal listing status. Some biologists think that the Western pond turtle and fishers, which are extremely rare, may actually be extirpated in this region. The PHS habitats identified within the plan area include wetlands, urban natural open space, riparian, and waterfowl-rich areas.



*Morse Preserve Bird Banding July 2003*

In 2002, Pierce County, in conjunction with WDFW and the University of Washington, completed a wildlife biodiversity plan for Pierce County. This plan identifies areas within Pierce County that provide for the greatest diversity of wildlife species, based on existing land cover (vegetation zones) and the concepts of species richness and representation. The areas with the highest diversity and representation were designated as Biodiversity Management Areas (BMAs). Connecting corridors between the BMAs have also been established to facilitate wildlife movement between BMAs. Collectively this system of BMAs and connecting corridors is referred to as the biodiversity network. In 2004, the County completed an assessment of this network and the one identified BMA within the plan area was removed because the habitat had been converted to agricultural fields. However, the plan area still contains biodiversity network connecting corridors along Lake Kapowsin and Kapowsin Creek (see Map F-36: Biodiversity Network).

## OPEN SPACE

There are three major open space corridors located within the plan area including Muck Creek from SR 7 to the headwaters of Muck Creek, the entire South Creek system, and a north/south system encompassing the Puyallup River, Kapowsin Creek, Lake Kapowsin, and Ohop Creek. A smaller open space corridor includes Tanwax Creek and Lake. (See Map F-8: Open Space Corridors)

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## OVERVIEW OF CURRENT OPEN SPACE PLANS, POLICIES AND REGULATIONS

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### PIERCE COUNTY COUNTY-WIDE PLANNING POLICIES

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All jurisdictions within Pierce County participate in the development of the Countywide Planning Policies (CWPPs.). Each jurisdiction's comprehensive plan needs to be consistent with the policies established in the CWPPs. The Pierce County CWPPs require all jurisdictions to plan for the provision of open space; consider as open space parks, environmentally sensitive lands and greenbelts, natural buffers, scenic and natural amenities unique geological features; designate appropriate open space; and encourage new housing to locate in a compatible fashion with open space designations or outside designated open space.

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### PIERCE COUNTY COMPREHENSIVE PLAN POLICIES

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The Pierce County Comprehensive Plan contains several policies that address open space. These policies establish some general criteria for areas that should be considered for open space. These criteria include areas where natural processes (e.g., wetlands and tidal actions) occur or sites that contain unusual landscape features (e.g., cliffs and bluffs), wooded areas, environmentally unique areas, and parcels which provide connectivity in the open space network.

The open space/greenbelt areas within the County are depicted in the map referenced in policy 19A.30.170 I. Section 19A.30.130, Objective 57A, states County programs which provide for preservation of open space shall have established priorities and these priorities will be used to rate open space proposals for Conservation Futures funding, Open Space Current Use Assessment taxation, Development Regulations bonus densities, and other County programs which acquire or preserve open space areas. Section 19A.30.130, Objective 59B, sets forth policies on the management and stewardship of County-owned open space lands. Finally, 19D.170 identifies the County's open space priorities grouped under high, medium, and low priorities.

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### PIERCE COUNTY DEVELOPMENT REGULATIONS

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Title 18A, Development Regulations-Zoning, Section 18A.35.025 contains standards for minimum residential amenities which include provisions for on-site open space areas. These standards require the dedication of open space land per dwelling unit for subdivisions and mobile home parks. Section 18A.35.050 addresses open space issues such as density incentives, open space location and designation criteria, permitted uses, classification mechanisms, and public access. Permitted uses within designated open space areas include pervious and impervious surface trails, passive recreation and associated accessory structures, agricultural practices and associated structures, aquaculture, utility easements, and drainfields.

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### OPEN SPACE PROGRAMS

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Different open space programs and development regulations lend themselves to protection and restoration of various designated open space areas. For example, when designated open space areas fall within the jurisdiction of the State's Shoreline Management Act, the County's

Shoreline Management Use Regulations are in effect. Likewise, when an open space area is located within a designated critical area, which is often the case since the mapping was primarily based upon critical area data, the County's Critical Area Regulations would apply. Outright purchase and other acquisition efforts, such as obtaining conservation easements, can be applied through the County's Conservation Futures Program or local land trust efforts. Property owners may choose to leave portions of their properties in an undeveloped condition in return for a reduction in their property taxes under the Current Use Assessment (CUA) program. Pierce County Conservation District Stream Team efforts and those of other local environmental organizations work to enhance and restore degraded riparian areas. Finally, the County's zoning regulations require a dedication of open space for certain types of development and certain zoning classifications may be established that require lower densities or intensity of use and the application of environmentally sensitive design standards.

#### CURRENT USE ASSESSMENT PROGRAM

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Since 1972, the County has offered a Current Use Assessment (CUA) program. This program provides property owners with a tax reduction incentive to maintain properties in productive agricultural land, timberland, or open space land condition. At the present time, there are approximately 413 properties enrolled under the open space category of the CUA program.

In the summer of 1999, the administrative procedures for the CUA program were revised and a public benefit rating system (PBRs) was adopted as a means of ranking applications for the CUA open space category. Properties are evaluated to determine what environmental features are present and points are given based upon open space priorities and bonus categories such as public access and property located within an urban area and within the designated open space corridor. The amount of tax reduction is based on a sliding scale of points with the most sensitive lands receiving the highest tax reductions.

#### CONSERVATION FUTURES PROGRAM

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The Parks Department also administers the Conservation Futures Program, which since 1991 has authorized the County to collect a real-estate property (6¼ cent per \$1,000.00 of assessed valuation) tax for the acquisition of open space properties or conservation easements. To date the County has collected \$26,900,000 and acquired 1,245 acres of valuable wildlife habitat and open space properties throughout the County. The properties are not only held by the County but also by the cities and land trusts within the County.

The County Parks Department, utilizing Conservation Futures Program monies, purchased the Muck Creek/Patterson Springs property for \$785,000 from the Tacoma Public Utilities in 2002. This is an 80-acre wildlife habitat site generally located near 252nd St. E. and 86th Ave. E. and adjacent to the Morse Wildlife Preserve. This property was transferred over to the Cascade Land Conservancy for long-term stewardship.

## DESCRIPTION OF DESIRED CONDITIONS

Most people recognize the need to protect the ecosystems that support fish, wildlife, and humankind. Each component of the natural environment was examined in detail and a variety

of ideas and proposed actions were articulated as methods to retain and enhance each resource. The following text describes the desired condition for each resource type in more detail. The policies contained in the next section were developed to address these desired conditions, which reflect the comments and concerns of the local citizens.

## GENERAL

Some strategies affect the natural environment on a Countywide basis such as public education and outreach efforts. The County, Washington State University Cooperative Extension Office, and other affected agencies should increase the level of public education and outreach methods. This could be accomplished through brochures, online resources, and informational material on human actions that can negatively impact the natural environment. Partnerships should be established with realty and escrow companies to notify potential buyers of environmental resources and stewardship opportunities.

## AIR RESOURCES

Air quality within the plan area is generally good; however, residents do tend to experience some localized problems with emissions of particulate matter and unpleasant odors. Development regulations should be amended to reduce dust emissions, negative odors, and air pollutants along main transportation corridors. Air quality studies and monitoring should be conducted for industrial businesses located within the Frederickson Employment Center, the 304th Street landfill, and along freight rail lines to determine the potential air quality impacts on residents. More public education and enforcement should be targeted toward impacts from burning in uncertified fireplaces and woodstoves, conducting slash burns, and illegal burning in barrels. Incentives should be provided to change wood burning facilities to natural gas. Methods should be explored to reduce negative smells coming from dairy farms.

## EARTH RESOURCES

### SOILS

The community has a strong desire to maintain native soils and minimize negative impacts on natural systems from soil disturbance associated with development activities. Strategies such as covering exposed soils, phasing clearing and grading activities to reduce the amount of exposed soils, and utilizing low impact development techniques should be applied to reduce erosion and sedimentation. Soils that support agricultural activities should be preserved.

### VEGETATION

Retaining native vegetation fosters a sense of a rural community as well as providing environmental benefits. A system of greenbelts should be established throughout the community that preserves native vegetation. New developments should be required to retain areas with native vegetation. Where new development is allowed to remove existing

vegetation and replant, the new plants should be native and maintained to ensure that revegetation efforts are successful. Invasive or exotic plant species such as Scots broom, tansy ragwort, and reed canary grass should be removed throughout the plan area.

The prairies and the oak woodlands are one of the historic vegetation types found within the plan area. The community places a high cultural value on their remaining prairies and oak trees as well as recognizing that they provide an important habitat for several resident critical or at-risk wildlife species. Preserving any remaining fragments of prairies and oak trees left within the plan area is a high priority. An inventory of prairies and oaks within the plan area is crucial to the development of critical area maps, which are used during the development review process. Prairie and oak inventories should be integrated into the County's critical area atlas maps. Efforts should be made to educate the public on the cultural and biological importance of prairie and oak savanna landscapes.

## WATER RESOURCES

### SURFACE WATER RUNOFF AND FLOODING

Maintaining the natural hydrologic conditions and functions, both within the plan area and in the adjacent watershed basins that receive stormwater runoff from the plan area, helps reduce flooding problems. Areas that are currently experiencing flooding problems (e.g., 224th St. E. and Meridian and 224th St. E. and Muck Creek) should be analyzed and identified to receive high priority for correction. Stormwater management systems (culverts and ditches) in new development should be appropriately sized so as to not cause additional flooding problems and existing stormwater facilities that are undersized should be upgraded.

### GROUNDWATER RESOURCES/AQUIFER RECHARGE AND WELLHEAD PROTECTION AREAS

Groundwater is the primary source of drinking water for the residents within the plan area. Protecting and conserving groundwater supplies and maintaining subsurface flows that replenish wetlands, streams and aquifers is very important. Some actions to foster groundwater and subsurface recharge include limiting the amount of impervious surfaces, utilizing low impact development techniques and prohibiting artificial channels and ponds that can leach water away from natural environmental features. Surface water management projects should also be constructed in such a manner as to prevent the diversion of surface water from one watershed basin to another.

Aquifer recharge and wellhead protection areas deserve special considerations. Any land use activities within these areas should be regulated in such a manner so as to prevent contamination of groundwater resources. The level of public outreach efforts to educate citizens about practices to protect aquifer recharge and wellhead protection areas should be increased. Signage identifying the limits of aquifer recharge and wellhead protection areas should be posted to help the public understand the boundaries of these sensitive areas. Once the Clover Creek and Nisqually Watershed Planning processes are complete, any newly identified aquifer recharge areas should be incorporated into the County's Critical Area Atlas - Aquifer Recharge and Wellhead Protection Area maps.



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## WATER QUALITY

The quality of water resources affects drinking water supplies and habitats for fish and wildlife species dependent on wetlands and shoreline areas. Sources of nonpoint pollution should be eliminated or reduced to protect the water quality within the plan area. Agricultural practices can be modified to eliminate fecal coliform bacteria contamination into riparian areas, such as restricting livestock and livestock waste from entering into rivers, creeks, and wetlands. Forest practice activities such as logging road construction, debris stockpiling, and removal of trees conducted adjacent to streams, wetlands and their buffers that result in erosion and increased water temperatures should be avoided. On-site sewage system requirements and practices that could potentially allow fecal coliform bacteria contamination into surface water and groundwater should be evaluated and, as necessary, amended. More emphasis should be placed on public education and outreach efforts that are geared towards reducing the impacts to water quality associated with typical household activities. Examples of such activities include fertilizer/pesticide application, disposal of waste and toxic chemicals, vehicle maintenance, and maintenance of septic systems.

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## SHORELINES

As land has developed in the plan area, surface water flow rates in streams may have changed. It is important that stream flow calculations be updated and that all streams that have flows sufficient to be classified as shorelines subject to the Shoreline Management Act (SMA) and SMP, are brought under jurisdiction of the SMP. In particular, Muck Creek should be evaluated to determine if any portion should be classified as a Shoreline of the State.



*Aerial view of Tanwax Lake*

Shoreline Environment designations in the plan area should be reviewed and, if necessary, updated. Specifically several shoreline properties along Tanwax Lake and Lake Kapowsin appear to have shoreline designations that do not reflect current conditions. Further review of these shorelines should be conducted to determine if they should be given a new Environment designation.

Additional actions can be taken along shorelines to provide greater protection. Density bonus provisions should be eliminated along shorelines, with a greater emphasis placed on creating additional public access points. And old, dilapidated structures, especially those with failing or non-existent septic systems, should be removed or brought into compliance with current code requirements.

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## WETLANDS

Many of the wetlands historically contained within the plan area have been filled and/or significantly impacted by development and natural resource activities. Preserving the wetland areas that do remain within the community is a major concern. In addition, any future development activities should be conducted in such a manner as to maintain the quality and

function of the existing wetland complexes. Where feasible and appropriate, wetland restoration activities should be undertaken to increase the healthy functioning of wetland systems (both natural and artificially created) which may have degraded as a result of human actions. Ditches that have artificially altered natural wetland systems should be disconnected and the original hydrologic regime restored.

## FISH AND WILDLIFE RESOURCES

Fish and wildlife data sources and mapping are the primary mechanisms used in the development review process. Where data is insufficient, habitats may be inadvertently lost. Species and habitat mapping information within the plan area should be updated. The current Critical Area Atlas maps should include fish and wildlife species and habitats that have not been adequately mapped. Special emphasis should be given to mapping the prairies and Oregon white oak trees remaining within the plan area. In addition, the County should coordinate with WDFW to verify the presence of certain fish and wildlife species, such as Chinook salmon and steelhead, bald eagles, Western gray squirrels, heron rookeries, migratory bird populations, and elk, within the plan area. WDFW should also establish monitoring stations for Morse Preserve and within the biodiversity network.

Existing fish and wildlife species and the habitats that support the species historically found within the plan area should be protected and where feasible restored. Bird friendly design standards should be developed to decrease injuries to migratory bird populations. An analysis should be conducted to determine the cause of low or no base flows in streams within the plan area. Other measures to protect fish and wildlife species and habitats include streamlining the permit process for restoration projects, removal of barriers for fish access, and promoting increased public education and outreach efforts.

Additional suggestions for improving riparian habitat include development of stream meanders and undercut banks, installation of large woody debris, planting of appropriate native vegetation and removal of invasive species such as reed canary grass, removal of fish passage blockages, and limiting or prohibiting livestock access into and adjacent to stream channels.

## OPEN SPACE

Open space areas provide a variety of benefits within a community including fish and wildlife habitat and movement corridors, visual breaks in the built environment, buffers between incompatible uses, and passive recreation areas. The Comprehensive Plan Open Space/Greenbelt map should be used as the foundation to identify the community open space system and then refined and expanded to include wetlands and other high priority open space areas. An inventory of all County-owned property should be conducted to determine if any are suitable for incorporation into the community open space network.

Public and private acquisition and conservation efforts should be implemented in order for designated open space areas to become more permanently protected. This can be accomplished in a variety of ways including utilizing Countywide impact fees or initiating an

open space bond to fund the acquisition of designated open space areas, promoting open space tax incentives, and coordinating with local land preservation organizations to purchase properties or acquire conservation easements. Public disclosure documents and brochures could help to notify property owners or prospective purchasers that a property is located within a designated open space system.

## ENVIRONMENT POLICIES

### GOALS

Maintain, protect, and enhance natural ecosystems, critical areas, and resource lands within the plan area to ensure current and future residents have the opportunity to live, work, and play in a healthy environment utilizing the following:

- Preserve to the maximum extent possible air quality, trees, prairies and oak woodlands, native fish and wildlife, native topsoil, streams, shorelines, wetlands, open space, greenbelts, and other natural habitats.
- Ensure residential and commercial developments are designed to protect the natural features and ecosystems on the site, and promote and provide incentives for development to be designed and sited in a manner that is sensitive to elements of the natural environment and to views of features important to the community.
- Protect and manage vital water resources, including both surface water management and groundwater quality through protecting the sole source aquifer, applying low impact development techniques, and limiting impervious coverage.
- Ensure the preservation of the shoreline and associated habitats of lakes, streams, and other water bodies.

Ensure public education about requirements necessary for environmental protection and non-regulatory ways to further preserve and enhance ecosystems. Make residents and businesses partners in the education process.

### AIR RESOURCES

#### AIR QUALITY

**GOAL GR ENV-1** Control the release of particulate matter and negative air emissions resulting from certain land use activities.

**GR ENV-1.1** Impose reasonable precautions to reduce dust emissions such as:

**GR ENV-1.1.1** Surfacing unpaved roads or surfaces with concrete, asphalt, or compacted gravel or requiring reduced vehicle speeds where surfacing is not feasible;

**GR ENV-1.1.2** On construction sites, employing water spray and preventing tracking of mud onto public roadways to reduce dust emissions; and

- GR ENV-1.1.3      Covering or wetting truck loads or allowing adequate freeboard to prevent the escape of dust bearing materials.
- GR ENV-1.2      Establish regulations regarding air quality related to logging yard and plywood mill operations (glues, laminates, steamers) and rendering plants. Explore voluntary strategies, where feasible.
- GR ENV-1.3      Monitor freight rail emissions from railroad freight trains in the Graham area, and take appropriate action toward decreasing any harmful emission levels. Consider the following:
  - GR ENV-1.3.1      Require the use of cleaner diesel fuel and retrofits to reduce emissions; and
  - GR ENV-1.3.2      Prohibit locomotives from idling all night.
- GR ENV-1.4      Conduct an air quality study to determine if emissions from the Frederickson power plant have an adverse effect on air quality in the Graham area, and take effective action toward eliminating any such adverse effects.
- GOAL GR ENV-2    Establish monitoring requirements for the 304th Street landfill operating permit.
  - GR ENV-2.1      Encourage the Clean Air Agency and TPCHD to establish operating permit conditions to require the landfill to conduct monitoring before the landfill reaches 50 megagrams of National Nonmethane Organic Compounds.
  - GR ENV-2.2      Require that monitoring data from the 304th Street landfill is submitted to the TPCHD for review to ensure that emissions fall within acceptable federal/state guidelines and condition of approvals.
- GOAL GR ENV-3    Encourage the expansion of natural gas to all areas of Graham so that this cleaner alternative is available to residents.
- GOAL GR ENV-4    Impose conditions on new development activities to eliminate or limit burn and slash activities.
- GOAL GR ENV-5    Work with federal and state agencies and dairy farm operators on methods to reduce negative smells to surrounding areas resulting from the Environmental Protection Agency (EPA) mandated treatments.
  - GR ENV-5.1      Work with the EPA and the State Department of Ecology to develop new standards that still protect water quality while decreasing negative smells. Consider best management practices for manure composting and manure lagoons.
  - GR ENV-5.2      Provide information to farmers on farm best management practices (methods and timing) to reduce negative smells.

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**NOISE, LIGHT, AND GLARE**

- GOAL GR ENV-6    Utilize traffic noise abatement paving materials and vegetation during construction of roads to deaden sound to surrounding residential uses.
  - GR ENV-6.1      Revise the zoning code to require landscaping, at least a minimum standard along major arterial roads.

## EARTH RESOURCES

### SOILS

- GOAL GR ENV-7** Maintain native soils and minimize impacts of soil disturbance on natural systems.
- GR ENV-7.1** Encourage the use of low impact development techniques as a method for preserving native soils.
  - GR ENV-7.2** Minimize erosion and sedimentation during the land development process.
    - GR ENV-7.2.1** Require that exposed soils be covered.
    - GR ENV-7.2.2** Phase clearing and grading activities on large development sites to reduce the amount of exposed soils.
    - GR ENV-7.2.3** Revegetate disturbed soils as soon as development activities are completed.
    - GR ENV-7.2.4** Apply a minimum depth of mulch in landscaping areas not covered by vegetation.
  - GR ENV-7.3** Preserve native soils that support agricultural activities.
  - GR ENV-7.4** Retain and re-use existing native topsoil during the land development process.
  - GR ENV-7.5** Reduce the amount of impervious surface areas resulting from development activity within the plan area.
    - GR ENV-7.5.1** Encourage the use of low impact development to reduce the total and/or effective amount of impervious surface area associated with development.
    - GR ENV-7.5.2** Develop incentive programs for use of innovative design techniques that reduce impacts from impervious surface areas associated with specific development projects.

### VEGETATION

- GOAL GR ENV-8** Develop planting and maintenance standards for development activities.
- GR ENV-8.1** New vegetation should be monitored for at least a 3-year time period, and any vegetation that is unhealthy or dies during this time period should be replaced.
  - GR ENV-8.2** Monitoring and maintenance plans should be submitted for any required revegetation areas.
- GOAL GR ENV-9** Utilize native plants to preserve the integrity of the local ecosystem.
- GR ENV-9.1** Native plants should be locally grown, acclimated to local growing conditions, and appropriate to underlying soils.
  - GR ENV-9.2** Identify locations in development proposals where installation of native plants is appropriate or required.



- GR ENV-9.3      Develop incentives for project applicants to encourage restoration of historic plant communities.
- GR ENV-9.4      Identify, preserve, and restore Oregon white oak woodlands, significant oak stands and trees, and prairies within the plan area.
  - GR ENV-9.4.1      Map all Oregon white oak woodlands, significant oak stands, significant oak trees, and prairies within the plan area and utilize in critical area review.
  - GR ENV-9.4.2      Preserve areas that are suitable for the growth of native oak trees.
  - GR ENV-9.4.3      Retain oaks and prairie plants where these plant species were the dominant historic, indigenous plant community type and maintain the natural setting with appropriate native understory.
- GR ENV-9.5      Remove invasive, exotic plant species and when possible, restore to the historic, indigenous plant community type.
  - GR ENV-9.5.1      Educate homeowners on invasive plant species.
- GR ENV-9.6      Develop a list of native vegetation types that are fire and pest-resistant for planting around structures.
  - GR ENV-9.6.1      Provide these lists to project applicants.

## WATER RESOURCES

### SURFACE WATER RUNOFF AND FLOODING

- GOAL GR ENV-10    Upgrade stormwater facilities (e.g., culverts and ditches) within the plan area, which are undersized and causing flooding problems.
  - GR ENV-10.1      Pursue additional studies of ground and surface water hydrology at the boundaries of Muck Creek and Clover Creek Basins to identify solutions to flooding problems (areas of particular concern are at 224th St. E. and Meridian and 224th St. E. at Muck Creek).
  - GR ENV-10.2      Adequately size new culverts so that flooding problems don't result from undersizing.
- GOAL GR ENV-11    Conduct surface water management projects in a manner that preserves the natural flow of surface water and discharge into its appropriate basin (i.e., avoid any 224th diversions of Muck Creek into another basin).
- GOAL GR ENV-12    Design any diversions of water to or from stream channels to protect the integrity of the natural system.

### WATER QUALITY

- GOAL GR ENV-13    Implement strategies to improve water quality within the plan area.
  - GR ENV-13.1      Limit the application of pesticides and fertilizers.

- GR ENV-13.1.1 Establish a free program to pick up and dispose of banned pesticides/fertilizers.
- GR ENV-13.2 Provide fencing for domesticated animals to prevent contamination of water resources (e.g., animal excrement).
- GR ENV-13.3 Provide adequate vegetative cover to maintain appropriate water temperatures and habitat along rivers, streams, lakes, etc.
  - GR ENV-13.3.1 Promote the use of low impact development techniques such as bioretention swales and bioretention areas to address water quality issues.
- GR ENV-13.4 Coordinate water quality monitoring efforts within the plan area.
  - GR ENV-13.4.1 Instigate a water quality study of the watercourses within the plan area utilizing benthic invertebrates as a monitoring tool.
  - GR ENV-13.4.2 Establish one source location, such as the TPCHD, as a repository for all water quality monitoring data that is collected.
  - GR ENV-13.4.3 Develop lake management plans for the lakes within the plan area (Kapowsin, Tanwax, Whitman, North and South Twin, Morgan, and Clear) that address water quality issues.

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#### GROUNDWATER AND WATER SUPPLY

- GOAL GR ENV-14 Protect and conserve groundwater supplies and subsurface flows within the plan area.
  - GR ENV-14.1 Limit the amount of impervious surfaces within aquifer recharge areas.
  - GR ENV-14.2 Utilize low impact development (LID) techniques to facilitate water recharge into aquifers, streams, and wetlands.
  - GR ENV-14.3 Reduce the conversion of ditches to culverts, which can cause negative impacts on aquifer recharge and subsurface flow/base stream flows.
  - GR ENV-14.4 Prohibit man-made ponds next to rivers, creeks, and streams that may cause leaching problems to surface and subsurface flows which recharge these watercourses.
    - GR ENV-14.4.1 When creating ponds to address fire flow issues, use best available science to identify pond location and design to ensure ease of maintenance while minimizing impacts to the natural environment.
  - GR ENV-14.5 Prohibit landfills and other uses which have the potential to pollute the aquifer and wellhead protection areas.
  - GR ENV-14.6 Conduct studies to evaluate the effect of well drilling within shallow aquifers located near creeks in the plan area (i.e., to determine impacts to surface water hydrology and base flows).
  - GR ENV-14.7 Increase public awareness of aquifer recharge and wellhead protection areas.

- GR ENV-14.7.1 Mail notices to residents within aquifer recharge and wellhead protection areas. Provide information on how to protect the water quality and water recharge within these areas.
- GR ENV-14.7.2 Post signs around the perimeters of aquifer recharge and wellhead protection areas to identify them as a sensitive area.
- GR ENV-14.8 Evaluate local aquifers for inclusion as designated aquifer recharge areas.
- GR ENV-14.9 Establish measures to retain surface water/groundwater recharge within the Muck Creek system (i.e., stop the loss from Muck Creek to Clover Creek Basin).
- GR ENV-14.10 Recommend the use of cisterns, gray water systems, water re-use systems, and drip irrigation systems as a method to conserve groundwater supplies.
- GR ENV-14.10.1 Water purveyors should offer incentives for water conservation measures.

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#### SHORELINES

- GOAL GR ENV-15 Promote the protection and enjoyment of shorelines within the plan area.
- GR ENV-15.1 Eliminate the density bonus associated with shoreline development along rivers, streams, and lakes within the plan area.
- GR ENV-15.2 Require public access on lakes as a condition of approval of any land development activity, except for construction of single-family dwelling units.
- GR ENV-15.3 Remove old, dilapidated structures (such as cabins) along lake shorelines that have failing or nonexistent sanitary sewer systems.
- GR ENV-15.4 Establish a public access point (preferably a park) on Lake Kapowsin that provides for boating, fishing, and picnic facilities.
- GR ENV-15.5 Allow the vacation of unopened public rights-of-way at shoreline locations only when another public access on the same water body has been provided as a replacement.

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#### WETLANDS

- GOAL GR ENV-16 Promote restoration activities in wetlands that have been degraded.
- GR ENV-16.1 Disconnect ditches that drain wetlands.

#### FISH AND WILDLIFE RESOURCES

- GOAL GR ENV-17 Map any neotropical migratory bird habitats and heron rookeries within the plan area.
- GR ENV-17.1 Establish bird-friendly design standards for cellular towers.

**GOAL GR ENV-18** Improve riparian habitat through actions such as development of stream meanders and undercut banks, installation of large woody debris, planting of appropriate native vegetation, and removal of invasive species such as reed canary grass, removal of fish passage blockages, and limiting or prohibiting livestock access into and adjacent to stream channels.

**GR ENV-18.1** Prohibit or strictly regulate the dredging or alteration of streams.

**GR ENV-18.2** Conduct an analysis to determine the cause of low or no base flows in the watercourses within the plan area.

## OPEN SPACE

### CONSERVATION, RESTORATION, AND MAINTENANCE

**GOAL GR ENV-19** Introduce a variety of strategies to encourage public and private organizations and private property owners to conserve, maintain, and restore open space areas.

**GR ENV-19.1** Require new developments to establish homeowners' maintenance agreements for designated open space areas and native vegetation retention areas.

**GR ENV-19.1.1** Require developers/builders to prepare and distribute brochures to prospective and subsequent homeowners regarding maintenance of critical areas and open space areas.

**GR ENV-19.1.2** Require notification, prior to the issuance of a building permit, land division approval, or other land development approval, to be recorded on the title of all property that contains an open space area. This title notification shall describe the location and appropriate uses permitted within the open space area. The notice on the title of the property is intended to provide future property owners information regarding any land use restrictions associated with the open space area.

**GR ENV-19.2** Require homeowners' maintenance agreements for natural open space areas and natural buffer areas.

**GR ENV-19.3** Develop best construction methods for activities within or nearby designated open space areas and to protect native vegetation retention areas.

**GR ENV-19.4** Place a conservation easement on existing and acquired publicly-owned open space sites prior to transfer to a land trust.

**GR ENV-19.4.1** Place conservation easements or covenants that restrict future uses to passive and low-impact active open space recreation activities on existing and acquired publicly-owned open space sites. Conservation easements should be worded to maintain open space use and function of a parcel in perpetuity.

**GR ENV-19.5** The sale of publicly-owned open space areas within the plan area is discouraged. In the event that sales occur, any proceeds from the sales shall be used to purchase an equivalent or greater amount of land for passive open space recreation use or land which provides an equivalent or greater ecological function and value within the plan area.

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ACQUISITION AND RETENTION

**GOAL GR ENV-20** Encourage acquisition and retention of open space within the plan area through a variety of strategies.

**GR ENV-20.1** Prioritize open space acquisition efforts within the plan area. Special preference should be given to those parcels that:

**GR ENV-20.1.1** Provide important links between existing open space, park and recreation, and school sites;

**GR ENV-20.1.2** Exceed 5 acres in size;

**GR ENV-20.1.3** Sites less than 5 acres in size that provide connectivity to other open space, park, or trail areas; and

**GR ENV-20.1.4** Offer significant views of Mount Rainier or the Cascade Mountain Range.

**GR ENV-20.2** Conduct an inventory of all public properties within the plan area, which may be utilized as open space and incorporated into a greenbelt park trail system.

**GR ENV-20.3** Consider amending the Pierce County Park, Recreation, and Open Space Plan to recommend that impact fees that are collected within the plan area be used to purchase and maintain open space land within the plan area.

**GR ENV-20.4** Encourage preservation of large tracts of open space corridors through site design mechanisms, such as mandatory clustering requirements, and set aside in separate tracts.

**GR ENV-20.5** Promote the Current Use Assessment program Public Benefit Rating System within the plan area.

**GR ENV-20.5.1** Concentrate outreach efforts to those properties located within open space areas depicted in the County's officially adopted open space/greenbelt map.

**GR ENV-20.5.2** Encourage participation within the program by conducting workshops within the plan area.

**GR ENV-20.6** Develop a process that will facilitate the Purchase and Transfer of Development Rights.

**GR ENV-20.6.1** Property designated on the adopted Open Space Corridors Map shall receive the maximum credit (incentive) as a sending site.

**GR ENV-20.6.2** Appropriate receiving sites shall not be located within open space tracts, wetlands, geologically hazardous areas, frequently flooded areas, vulnerable deep aquifers, or critical fish and wildlife habitat areas.



- GR ENV-20.7** Require developers to use low impact development techniques when developing property located within the designated open space areas as depicted on the Open Space Corridors Map.

## IMPLEMENTING ACTIONS

The following list of actions needs to be completed in order to implement the policies contained within this plan. They are arranged according to the timeframe within which each should be completed: short, medium, or long term. Short-term actions should occur within one year of plan adoption. Mid-term actions should be completed within 2-5 years. Long-term actions should be completed within 5-10 years of plan adoption. The entity or entities responsible for leading the effort to complete the action item is listed in parenthesis following the action. Actions are assigned to the Land Use Advisory Commission (LUAC), Pierce County Planning and Land Services (PALS), Pierce County Economic Development (ED), Pierce County Parks and Recreations (Parks), Pierce County Public Works & Utilities (PWU), and Tacoma-Pierce County Health Department (TPCHD).

### SHORT TERM ACTIONS (UPON PLAN ADOPTION TO 1 YEAR)

1. Amend the County Comprehensive Plan Open Space/Greenbelt Map to adopt the changes set forth in the Proposed Open Space/Greenbelt Refinements Map. (PALS, Parks)
2. Work with the local land trusts, Nisqually Tribe, Tahoma Audubon, and Pierce County WSU Cooperative Extension Office to conduct workshops within the plan area to promote participation in the Current Use Assessment Public Benefit Rating System. (PALS, Parks)
3. Conduct a meeting or series of meetings with the local land trusts to discuss the adopted Open Space/Greenbelt Map and open space acquisition priorities and opportunities. (PALS, Parks, Land Trusts)
4. Conduct an analysis to determine the feasibility of placing an open space tax initiative (RCW 82.46.070) on the ballot. (Parks)
5. Work with local land trusts and environmental organizations to sponsor properties within the plan area for acquisition through the Conservation Futures Program. (PALS, Parks)
6. Utilize the open space network map when delineating proposed major and minor trail systems. (PALS, Parks)
7. Amend Title 18J, Design Standards and Guidelines to establish design standards for construction that is located within designated open space/greenbelt areas. Integrate green building techniques into these design standards. (PALS)
8. Amend the Pierce County Critical Area regulations to reference the oak woodland and prairie map into the Critical Areas Atlas.
  - Establish a streamlined permit process for vegetation restoration projects.
  - Require property disclosure requirements to notify prospective purchasers that a wetland or fish and wildlife habitat area exists on the parcel.

- Provide criteria for road development in known wildlife movement corridors.
  - Require the removal of illegal wetland fill and restoration to original functions and values.
  - Establish the requirement for developers/builders to provide homeowner education on open space/critical area maintenance.
9. Amend Title 18A, Pierce County Zoning Code to reduce the levels of density and intensity of allowable uses within those portions of the natural environment that contain critical areas and open space corridors by implementation of a Rural Sensitive Resource Zone. Adopt design criteria (such as clustering and building construction), and site development standards (such as Low Impact Development, maximum impervious surface coverage, minimum vegetation retention, and open space dedication) within this zone.

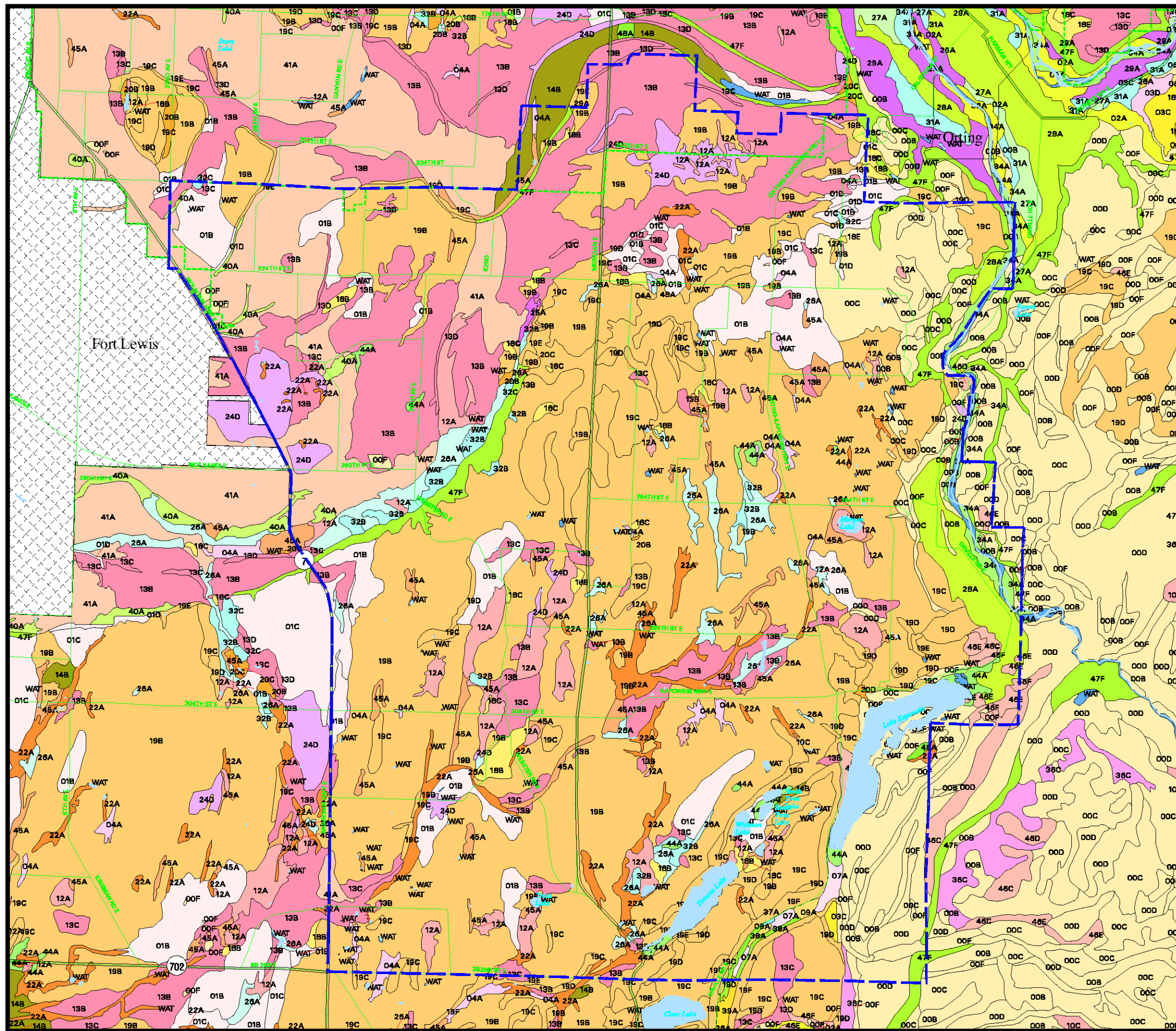
### MID-TERM ACTIONS (1-5 YEARS)

1. Complete an update to the Pierce County Shoreline Master Program. Actions included in the SMP update should include:
  - Correct errors to the Pierce County Shorelines Atlas.
  - Create new Shoreline Environment designations in several locations.
  - Identify potential location for additional public access points.
  - Eliminate shoreline density bonus provisions. (PALS)
2. Establish a process to use countywide park impact fees to purchase designated open space properties.
3. Amend Title 18A, Pierce County Zoning Code to eliminate shoreline density bonus provisions.
4. Amend the County's subdivision and platting regulations to establish a requirement for developers/builders to provide homeowner educational material on open space and critical area tract maintenance. (PALS)
5. Complete watershed basin plans, which will include the following:
  - Identify potential flood hazard/prone areas
  - Establish water quality baselines and monitoring data for the streams, lakes and wetlands within the plan area and also those systems that serve as stormwater receiving areas outside the plan area.
  - Identify sites for potential acquisition and where restoration activities would have the most benefit.
  - Identify high priority capital improvement projects to reduce or eliminate flooding problems on 224th St. E. (PWU-WPs)
6. Conduct an inventory of publicly owned properties located within the adopted open space network to determine suitability for long-term stewardship and management as permanent open space and:
  - Place conservation easements on those parcels designated for permanent open space.

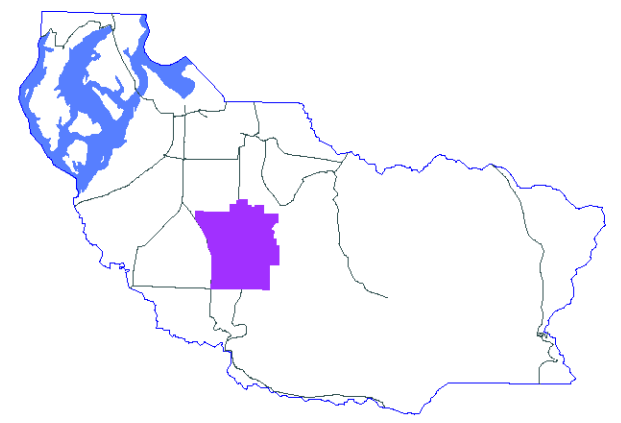
- Prepare long-term management plans for any parcels identified for permanent open space.
  - Initiate transfer of these properties to a local land trust for long-term management and stewardship. (PALS, Parks, Land Trusts)
7. Provide online access to environmental constraints on a parcel of land and educational materials on environmental stewardship techniques at the Pierce County PALS Development Center. (Parks, WSU Cooperative Extension Office)
  8. Amend the County Public Works and Utilities protocols to require the reconstruction of infrastructure that acts as a barrier to fish or any wildlife passage when any public road or utility project would affect or be affected by the blockage. (PWU)

#### LONG TERM ACTIONS (5-10 YEARS)

1. Adopt detailed inventories of flood hazard areas within Pierce County to augment the FEMA Flood Insurance Rate Maps and Flood Boundary Hazard Maps. (PWU-WPs)
2. Implement an annual on-site septic performance test program to determine whether these systems are functioning properly. (TPCHD)
3. Develop and implement a long-term water quality monitoring program. (TPCHD, PWU, PALS, DOE, WSU-Cooperative Ext.)
4. Promote efforts to remove non-native plants throughout the plan area. (Nisqually Tribe, Conservation District)



Pierce County, Washington

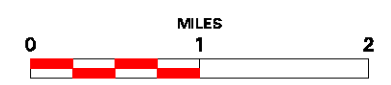


Soils

- Alderwood gravelly sandy loam (01B, C, D)
- Bellingham silty clay loam (04A)
- Dupont muck (12A)
- Everett gravelly sandy loam (13B, C, D)
- Everett stony sandy loam (14B)
- Indianola loamy sand (18B)
- Kapowsin gravelly loam (19B, C, D, E)
- Kitsap silt loam (20B)
- McKenna gravelly loam (22A)
- Neilton gravelly loamy sand (24D)
- Nisqually loamy sand (25A)
- Norma fine sandy loam (26A)
- Pilchuck fine sand (29A)
- Ragnar sandy loam (32C)
- Shalcar muck (38A)
- Spuna loam (40A)
- Spanaway gravelly sandy loam (41A)
- Tanwax muck (44A)
- Tisch silt (45A)
- Xeroschrepts (47F)
- Xerosols (48A)
- Gravel Pit (00F)
- Water (WAT)
- Not Part of Soil Survey

Source: Soil Survey of Pierce County Area, Washington, 1979, US Department of Agriculture, Soil Conservation Service.

- Comp. Urban Growth Area Boundary
- Graham Community Plan Boundary

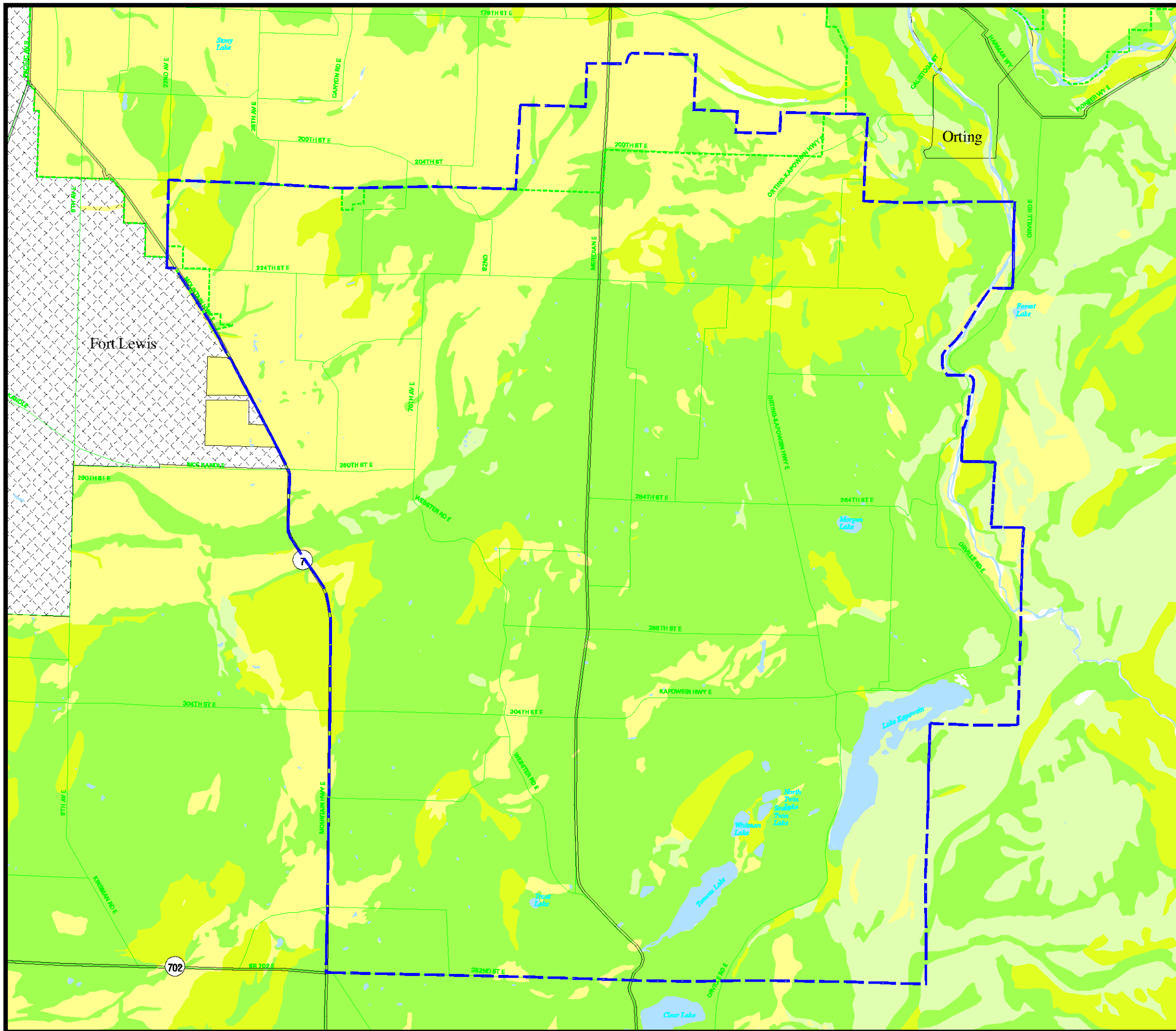


Department of Planning and Land Services

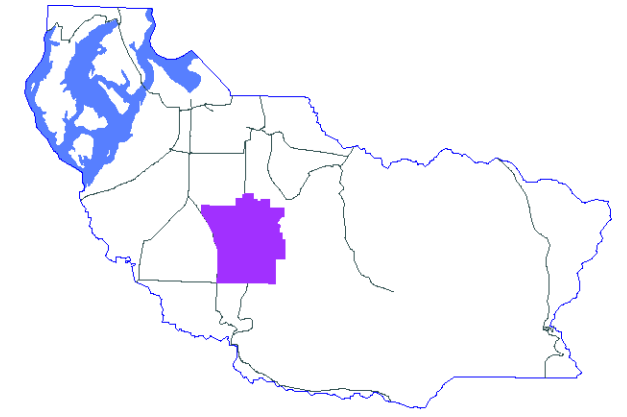
Plot Date: February 07, 2006

**Graham Community Plan**









## Pierce County, Washington



### Hydrologic Soil Groups

- |   |         |   |         |
|---|---------|---|---------|
|  | Group A |  | Group C |
|  | Group B |  | Group D |

Note: Hydrologic Soil Groups are defined by the Soil Conservation Service. Each soil type falls into one of four groups that represent varying degrees of runoff potential.



Group A - Low runoff potential; soils with high infiltration rates, consisting of deep, well to excessively drained sands and gravels; high rate of water transmission.

Group B - Low to moderate runoff potential; soils with moderate infiltration rates, consisting of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse textures; moderate rate of water transmission.

Group C - Moderate to high runoff potential; soils with slow infiltration rates, consisting of soils with a layer that impedes downward movement of water, or soils with moderately fine to fine texture; slow rate of water transmission.

Group D - High runoff potential; soils with very slow infiltration rates, consisting of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material; very slow rate of water transmission.

Source: Soil Survey of Pierce County Area, Washington, 1979, US Department of Agriculture, Soil Conservation Service.

-  Comp. Urban Growth Area Boundary
-  Graham Community Plan Boundary

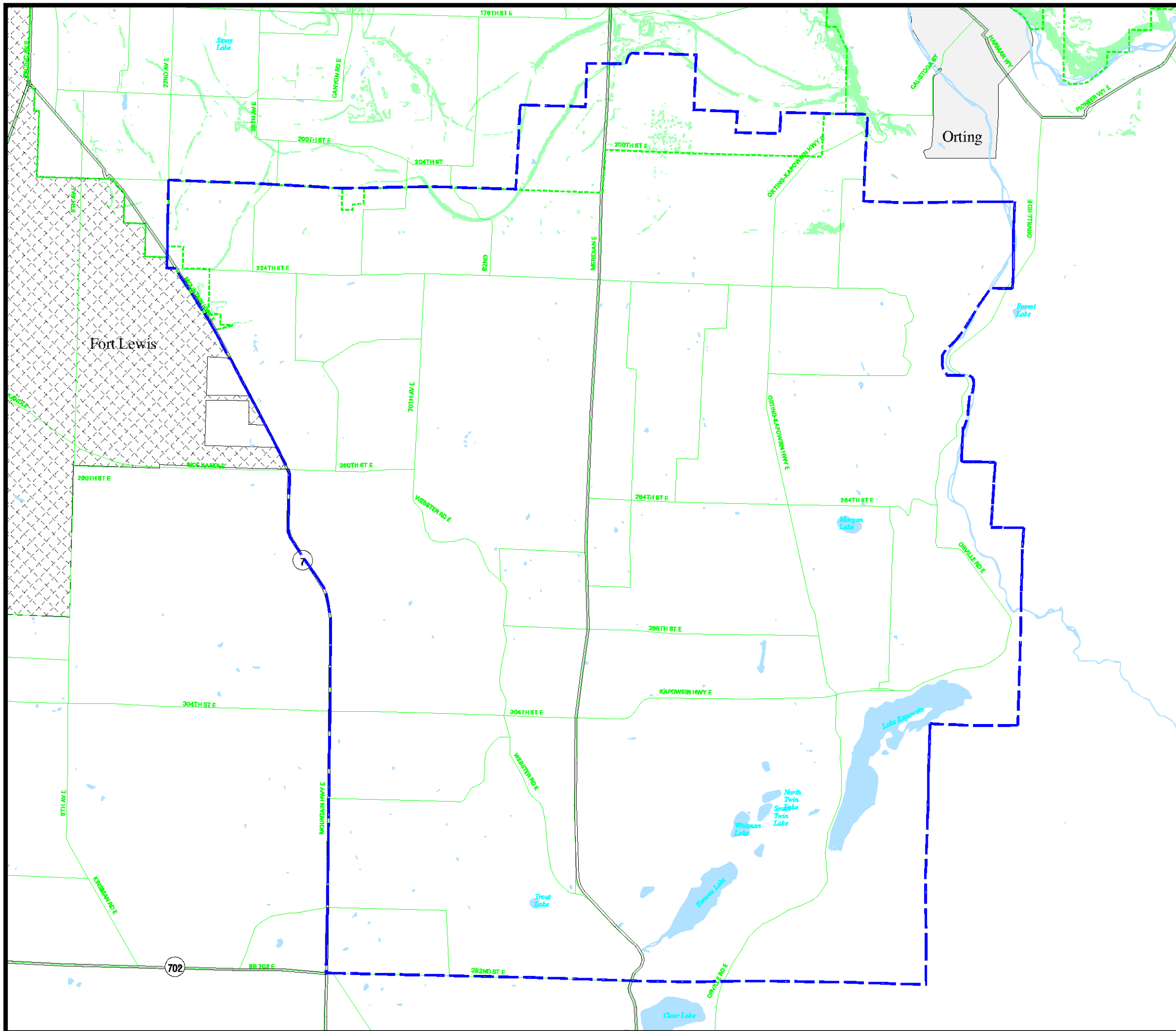


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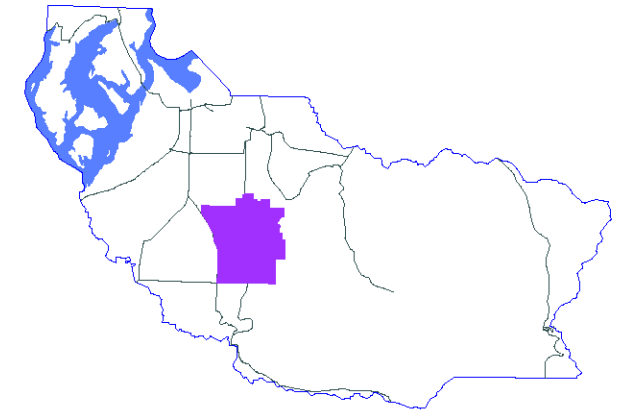
Plot Date: December 07, 2005

# Graham Community Plan





Pierce County, Washington



Potential Landslide Hazard Areas

Potential Landslide Hazard Area

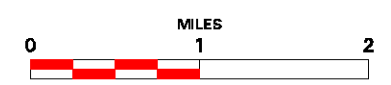
Adopted October 19, 2004 - Ord. #2004- 56s  
Effective March 1, 2005

Pierce County Code Title 18E regulates activities within Landslide Hazard Areas.

The boundaries of landslide hazard areas are approximate and are intended only to provide an indication of the presence of landslide hazard areas. Additional landslide hazard areas that have not been mapped may be present.

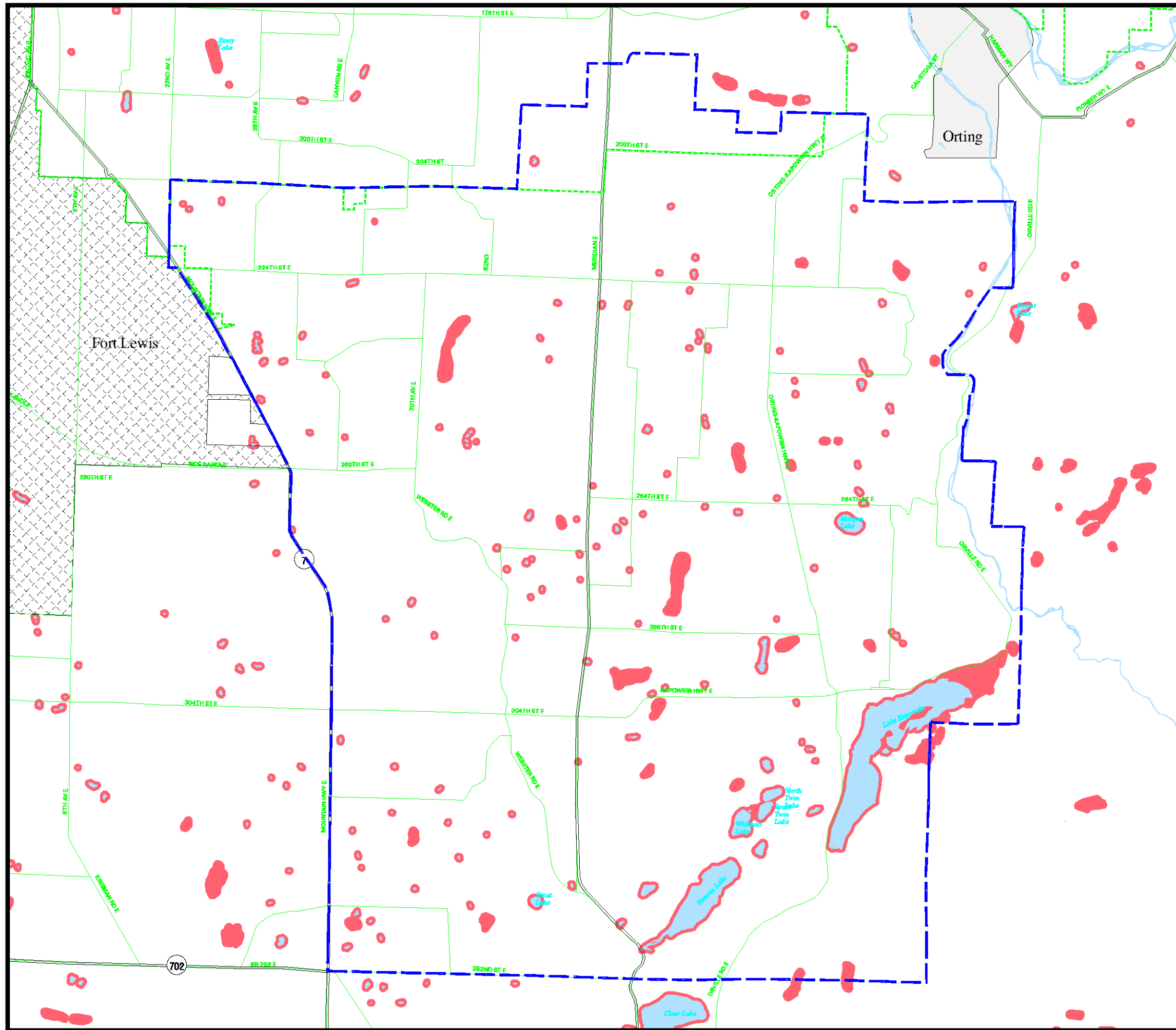
Sources:  
1) Washington State Department of Ecology, Coastal Zone Atlas Digital Data, 2001, with a 300' Potential Review Trigger Distance as per Title 18E, 80. The data has been slightly modified to match Pierce County's parcel layer.  
2) Steep Slope Data Derived from Pierce County's Digital Orthophotography, 2001. Data Developed for Urban Areas Only.

Comp. Urban Growth Area Boundary  
Graham Community Plan Boundary

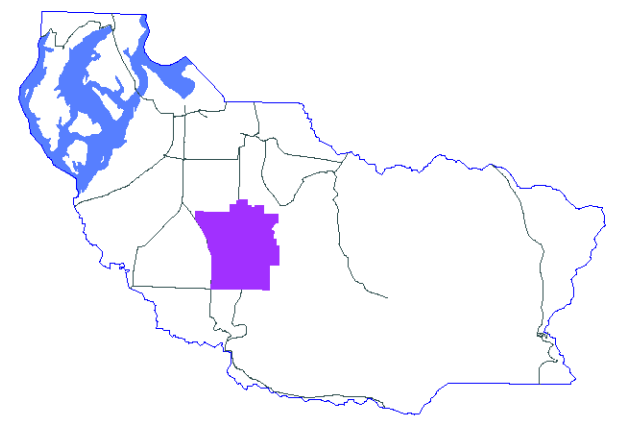


Department of Planning and Land Services  
Plot Date: December 07, 2005

Graham Community Plan



**Pierce County, Washington**



**Potential Erosion Hazard Areas**



 Potential Freshwater Shoreline Erosion Hazard Area

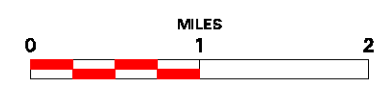
**Adopted October 19, 2004 - Ord. #2004- 56s**  
**Effective March 1, 2005**

Pierce County Code Title 18E regulates activities within Erosion Hazard Areas.

The boundaries of erosion hazard areas are approximate and are intended only to provide an indication of the presence of erosion hazard areas. Additional erosion hazard areas that have not been mapped may be present.

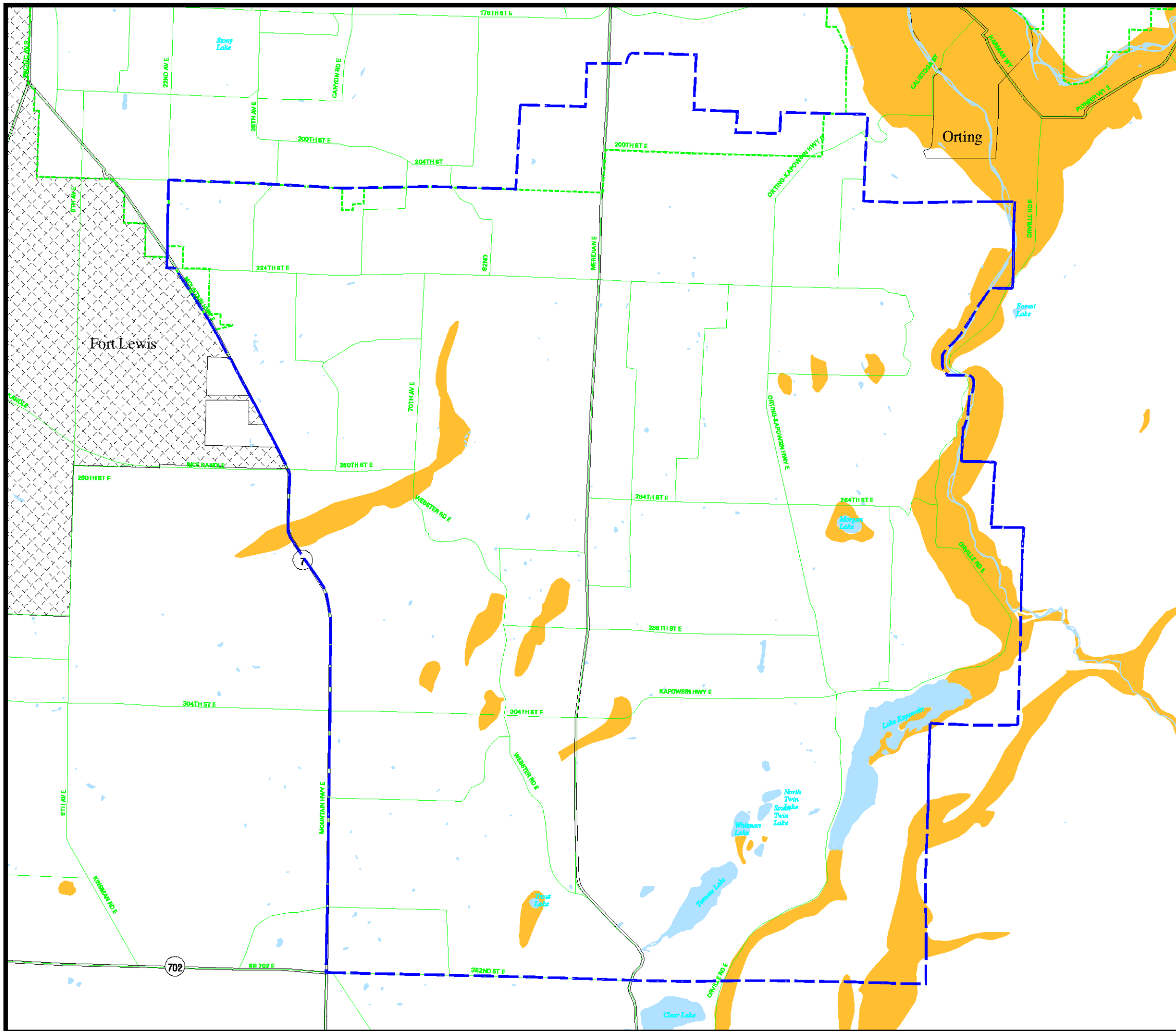
Sources:  
 1) Puget Sound Shoreline developed from Pierce County LIDAR Database, with a 200' Potential Review Trigger Distance as per Title 18E.110.  
 2) WA Dept. of Natural Resources Hydrography Database, lakes and pond greater than 2500 square feet, with a 200' Potential Review Trigger Distance as per Title 18E.110.

 Comp. Urban Growth Area Boundary  
 Graham Community Plan Boundary

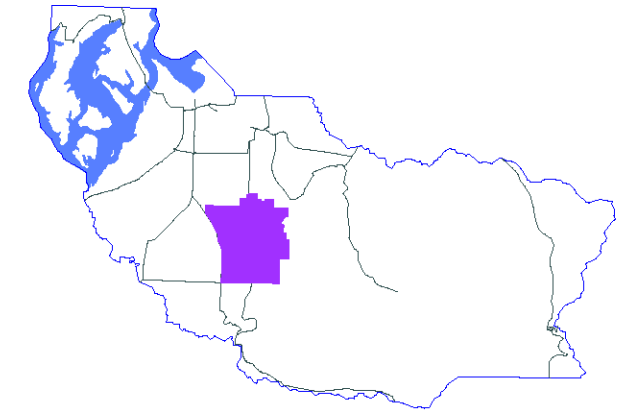


Department of Planning and Land Services  
 Plot Date: December 06, 2005


**Graham Community Plan**



**Pierce County, Washington**



**Potential Seismic Hazard Areas**

 Moderate to High Potential Liquefaction Hazard Area

Adopted October 19, 2004 - Ordinance No. 2004- 57s



Effective March 1, 2005

Pierce County Code Title 16B regulates activities within Seismic Hazard Areas.

The boundaries of seismic hazard areas are approximate and are intended only to provide an indication of the presence of said areas. Additional seismic hazard areas that have not been mapped may be present.

Source:  
Liquefaction Susceptibility and Site Class Maps for WA State  
by Stephen F. Palmer, Samantha L. Maggio, Eric L. Bilderback,  
James L. Foelstra, Derek S. Folger, and Rebecca A. Niggemann,  
Washington Department of Natural Resources (DNR),  
Division of Geology and Earth Resources.

Note:  
Liquefaction hazard areas are areas underlain by unconsolidated sandy or silt soils and a shallow groundwater table capable of liquefying in response to earthquake shaking.

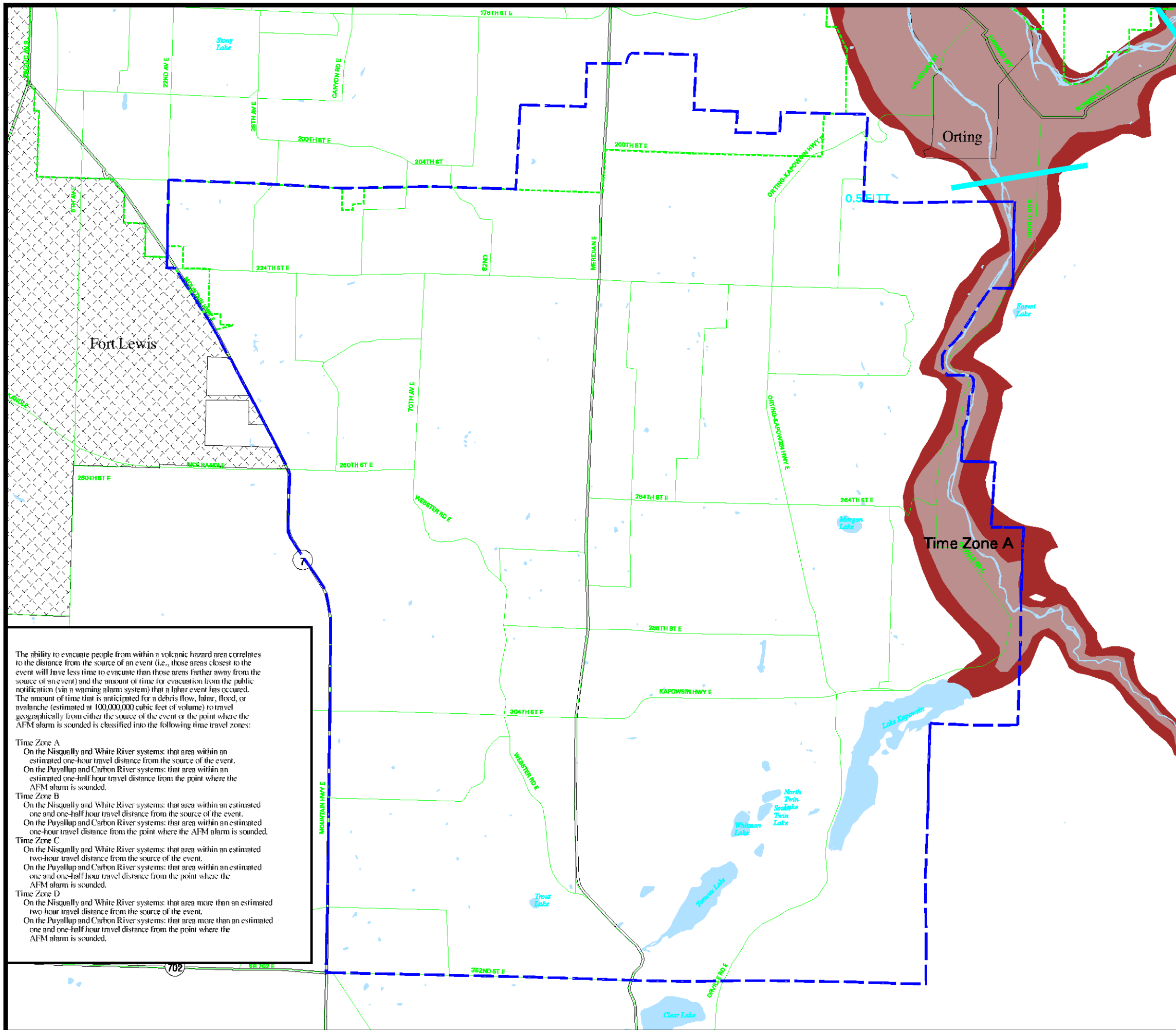
 Comp. Urban Growth Area Boundary  
 Graham Community Plan Boundary



Department of Planning and Land Services

Plot Date: December 07, 2005

**Graham Community Plan**



The ability to evacuate people from within a volcanic hazard area correlates to the distance from the source of an event (i.e., those areas closest to the event will have less time to evacuate than those areas further away from the source of an event) and the amount of time for evacuation from the public notification (via a warning alarm system) that a lahar event has occurred. The amount of time that is anticipated for a debris flow, lahar, flood, or avalanche (estimated at 100,000,000 cubic feet of volume) to travel geographically from either the source of the event or the point where the AFM alarm is sounded is classified into the following time travel zones:

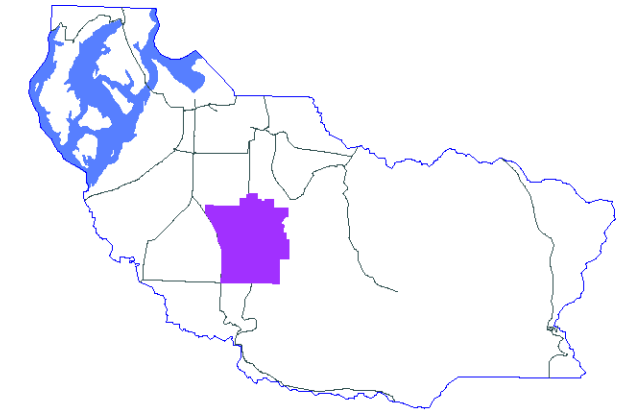
**Time Zone A**  
 On the Nisqually and White River systems: that area within an estimated one-hour travel distance from the source of the event.  
 On the Puyallup and Carbon River systems: that area within an estimated one-half hour travel distance from the point where the AFM alarm is sounded.

**Time Zone B**  
 On the Nisqually and White River systems: that area within an estimated one and one-half hour travel distance from the source of the event.  
 On the Puyallup and Carbon River systems: that area within an estimated one-hour travel distance from the point where the AFM alarm is sounded.

**Time Zone C**  
 On the Nisqually and White River systems: that area within an estimated two-hour travel distance from the source of the event.  
 On the Puyallup and Carbon River systems: that area within an estimated one and one-half hour travel distance from the point where the AFM alarm is sounded.

**Time Zone D**  
 On the Nisqually and White River systems: that area more than an estimated two-hour travel distance from the source of the event.  
 On the Puyallup and Carbon River systems: that area more than an estimated one and one-half hour travel distance from the point where the AFM alarm is sounded.

## Pierce County, Washington



## Volcanic Hazard Areas

- Case I Inundation Level (Debris Flow & Debris Avalanche Zone) 500 to 1,000 Year Frequency
- Case II Inundation Level (Debris Flow & Debris Avalanche Zone) 100 to 500 Year Frequency
- 0.5 ELTT Estimated Lahar Travel Time (in hours) from when the AFM Warning System sounds the alarm for lahars approaching the Case I Lahar in magnitude

Adopted October 19, 2004 - Ordinance No. 2004- 57s

Effective March 1, 2005

- Comp. Urban Growth Area Boundary
- Graham Community Plan Boundary

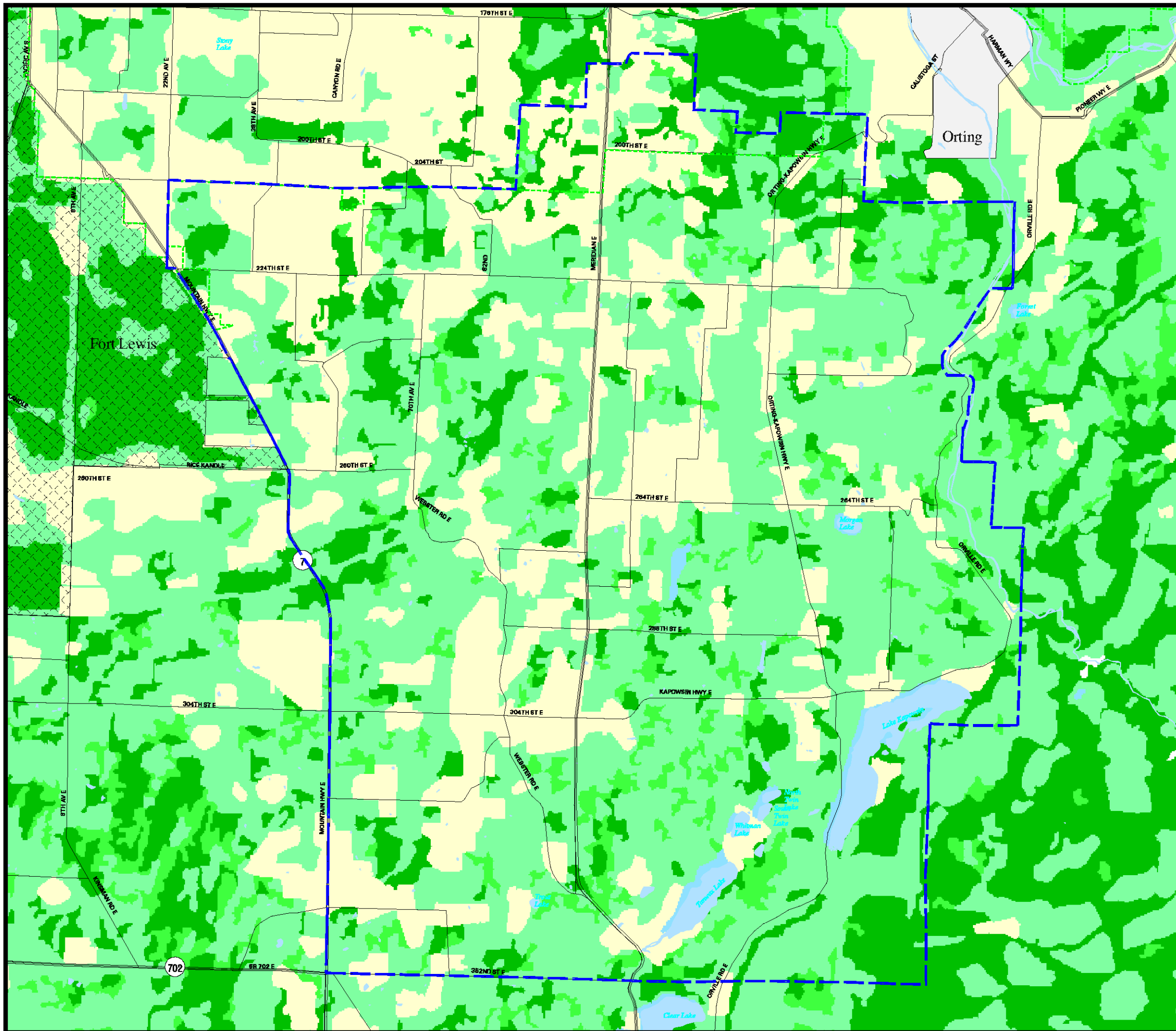


Department of Planning and Land Services

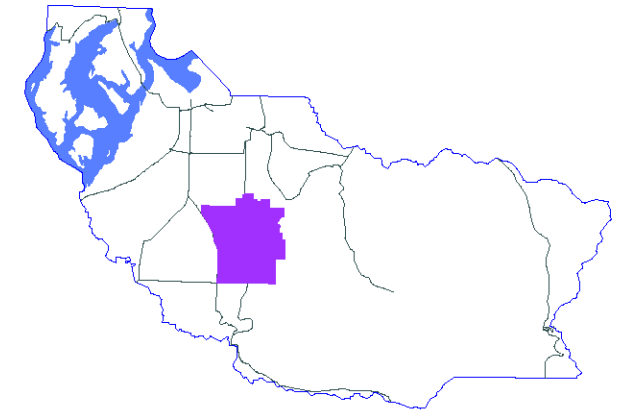
Plot Date: December 07, 2005

# Graham Community Plan





**Pierce County, Washington**

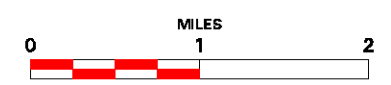


**1991 Classified Canopy Cover**

- > 70% crown closure of conifer, w > 10% crown closure in trees > 21" DBH and < 75% hardwood/shrub (Late Seral)
- > 70% crown closure of conifer, w < 10% crown closure in trees > 21" DBH and < 75% hardwood/shrub (Mid Seral)
- > 10% & < 70% crown closure of conifer, and < 75% hardwood/shrub (Early Seral)
- Other lands in forested areas (includes < 10% crown closure of conifer or > 75% hardwood; clear cuts, meadows, etc.)
- Water
- Non-Forested Areas (Urban, Agric., Rangeland, Barren, Glaciers)

SOURCE:  
Washington Department of Natural Resources - Landsat Thematic Mapper Images, 1988 & 1991. Timber Harvest information extracted by DNR, using Change Detection procedures, from Landsat Thematic Mapper Images from 1991 and 1993.

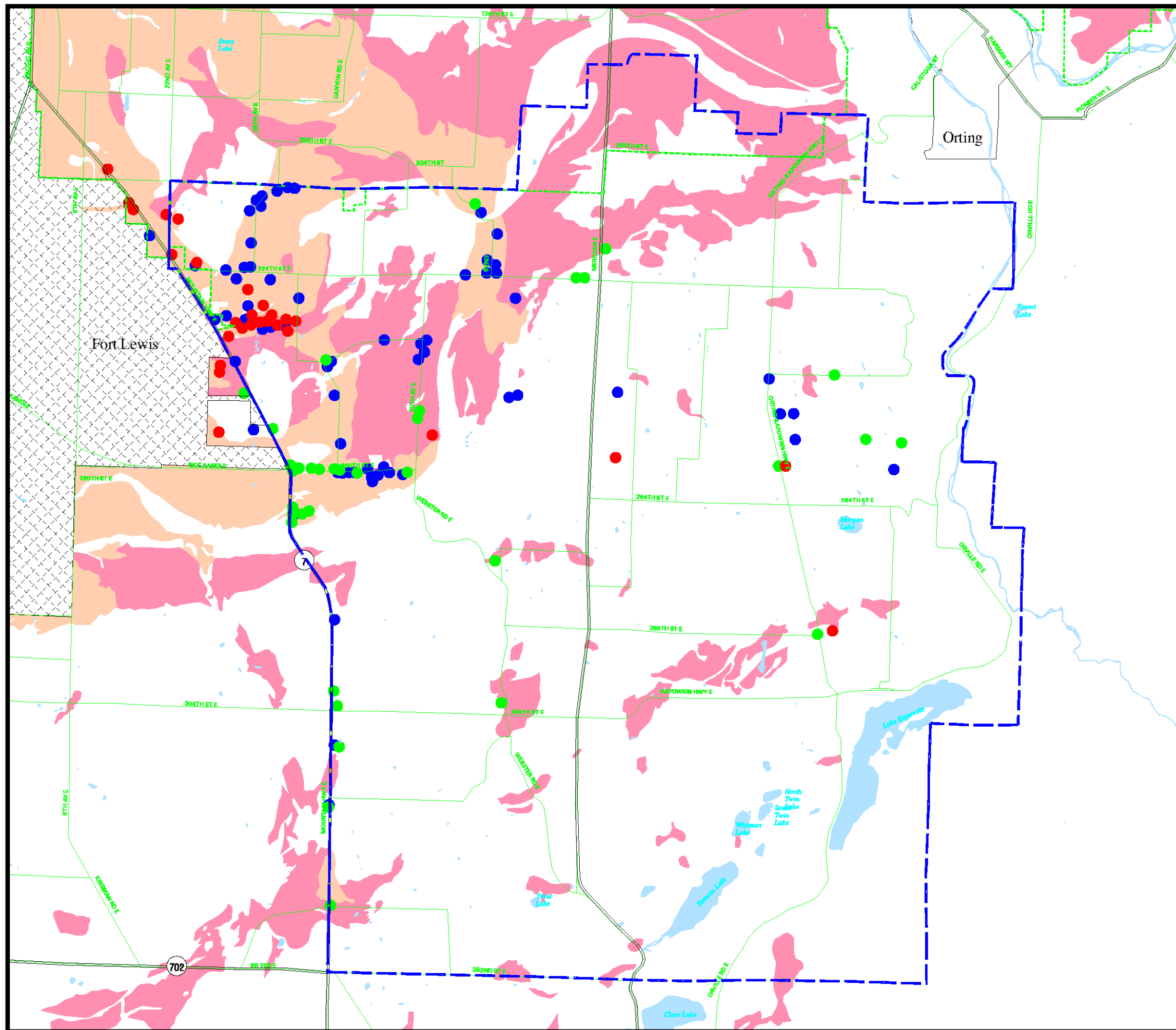
- Comp. Urban Growth Area Boundary
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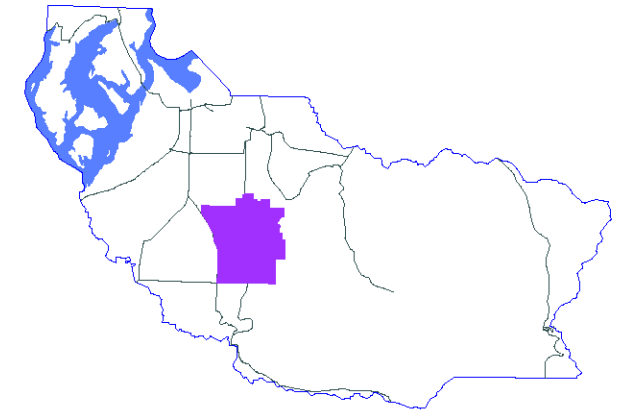
Department of Planning and Land Services  
Plot Date: February 07, 2006

**Graham Community Plan**





## Pierce County, Washington



## Prairie Inventory

- Camas
- Oregon White Oak
- Other Prairie Species

Prairie Inventory Source: Victoria Olson,  
Puget Sound Native Landscape, May –July 2003

## Soils

- Everett gravelly sandy loam (13B, C, D)
- Spanaway gravelly sandy loam (41A)

Source: Soil Survey of Pierce County Area, Washington, 1979,  
US Department of Agriculture, Soil Conservation Service.

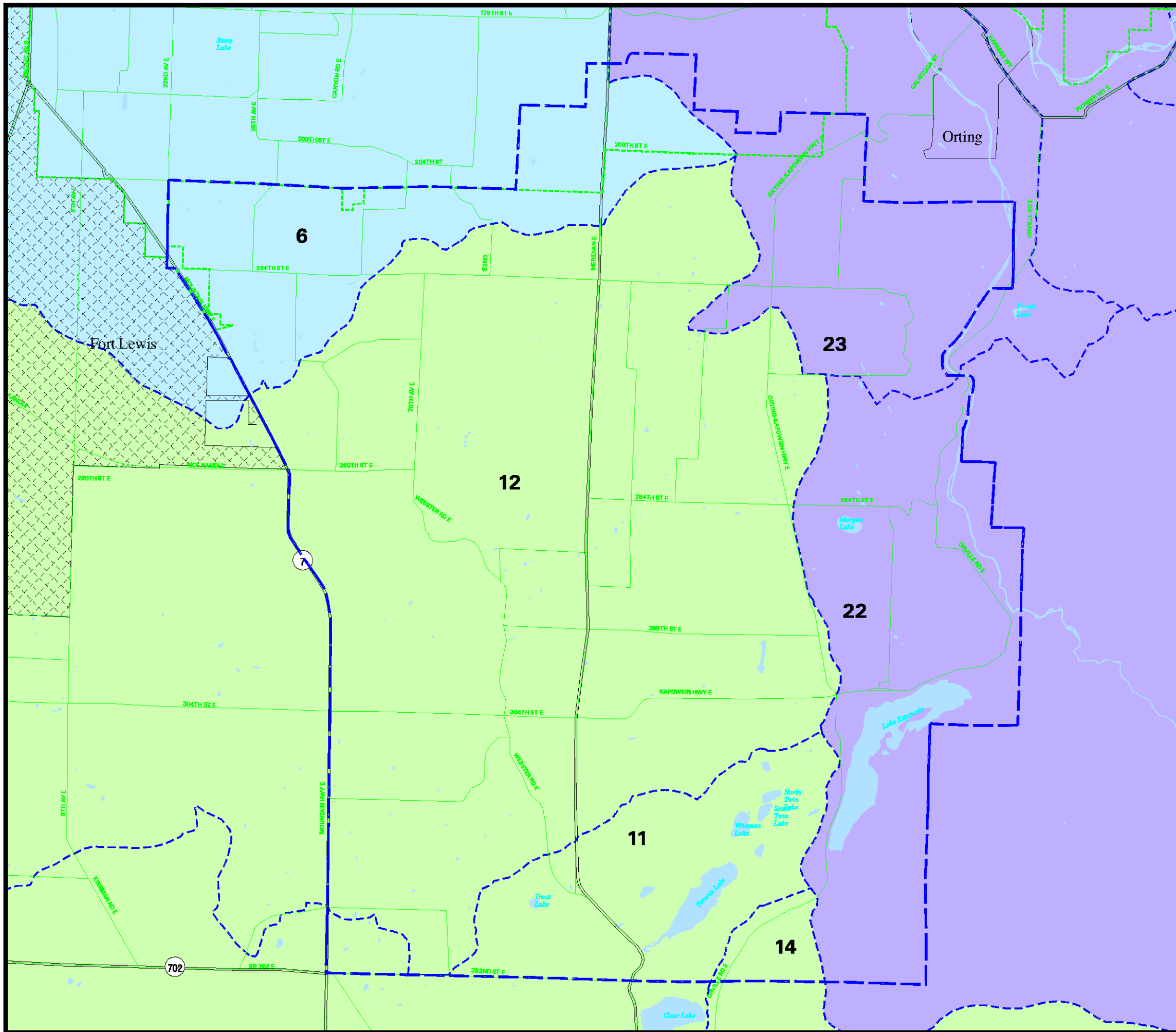
- Comp. Urban Growth Area Boundary
- Graham Community Plan Boundary



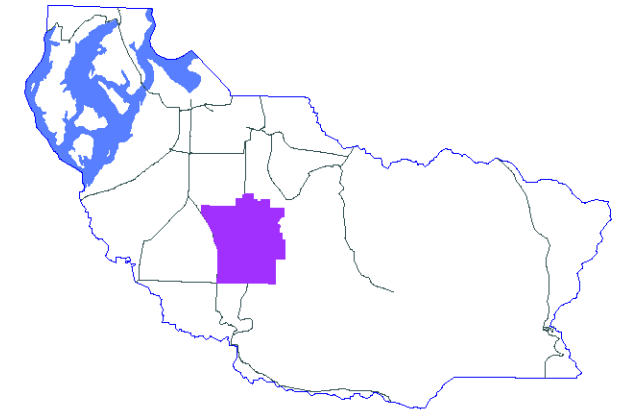
Department of Planning and Land Services

Plot Date: December 07, 2005

# Graham Community Plan



**Pierce County, Washington**



**Watersheds**

- Tacoma Watershed  
(aka Clover/Chambers Creek)  
6 Clover Cr./Steilacoom Sub-basin
- Puyallup Watershed  
22 Upper Puyallup River Sub-basin  
23 Mid Puyallup River Sub-basin
- Nisqually Watershed  
11 Mid Nisqually River Sub-basin  
12 Muck Creek Sub-basin  
14 Ohop Creek Sub-basin

Note: There are four regional watersheds in Pierce County that drain into Puget Sound. They are called Water Resource Inventory Areas (WRIAs). Tacoma, Puyallup & Nisqually Watersheds are three of the WRIAs. The four WRIAs were divided into twenty-four sub-basins by the Pierce County Watershed Ranking Committee, which was established by the County Executive in 1987 with the goal of ranking County watersheds. The "Final Report of the Pierce County Watershed Committee" was adopted through Resolution No. R88-152, by the County Council, November 29, 1988. In recent years, two additional sub-basins, Burley/Minter Creek and Fox Island, have been added to the list, bringing the total number of sub-basins to 26.

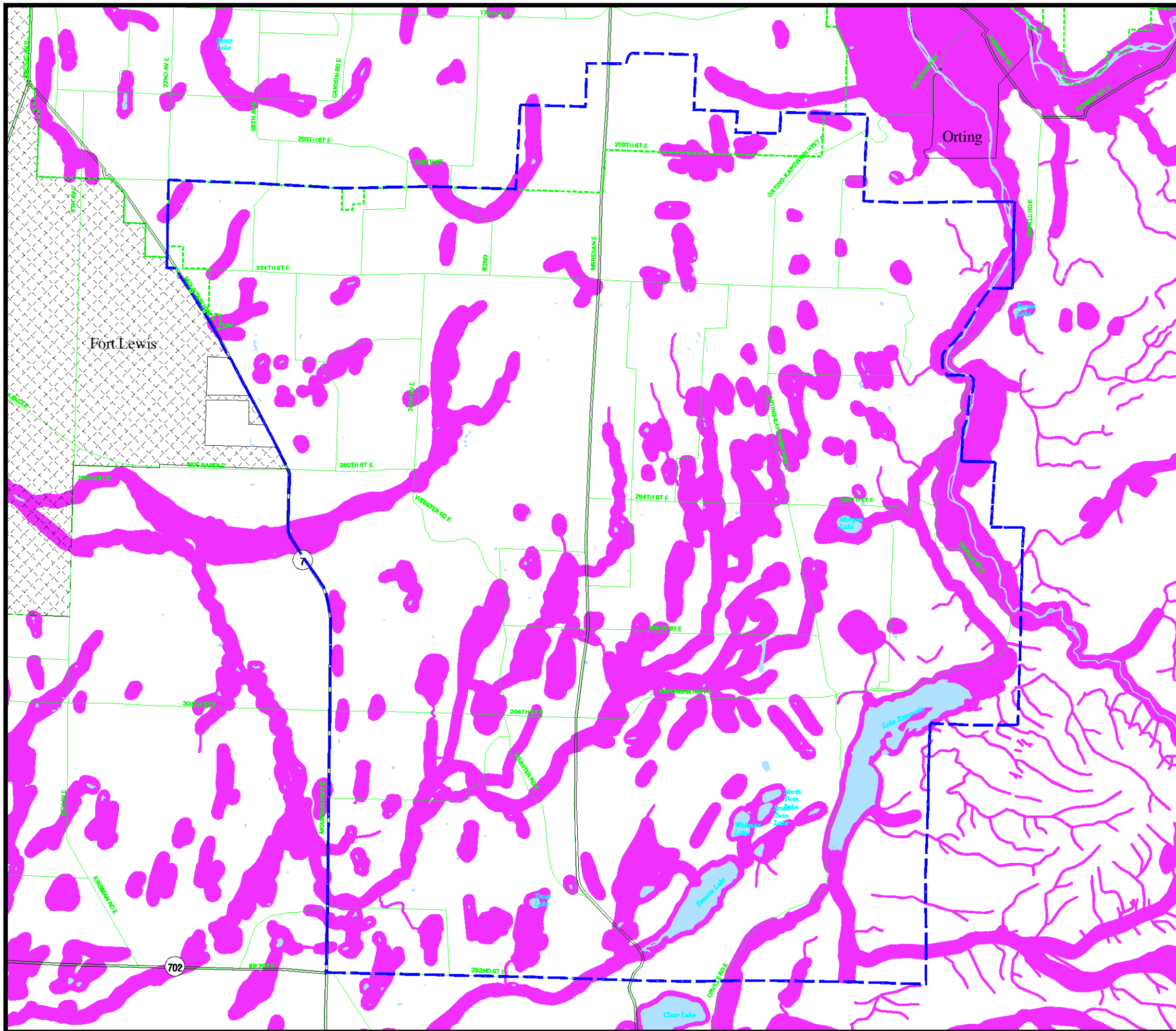
- Comp. Urban Growth Area Boundary
- Graham Community Plan Boundary



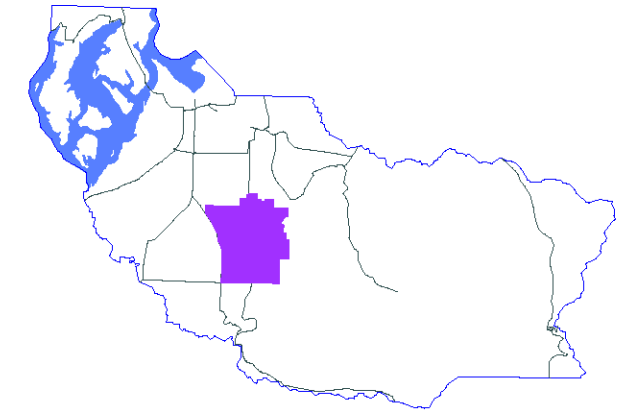
Department of Planning and Land Services

Plot Date: February 07, 2006

**Graham  
Community Plan**



## Pierce County, Washington



# Potential Flood Hazard Areas

 Potential Flood Hazard Area

**Adopted October 19, 2004 - Ord. #2004- 56s**  
**Effective March 1, 2005**

Pierce County Code Title 18E regulates activities within Flood Hazard Areas.



The boundaries of flood hazard areas are approximate and are intended only to provide an indication of the presence of said areas. Additional hazard areas that have not been mapped may be present.

**Source:**

- 1) Flood Insurance Rate Map (FIRM), Federal Emergency Management Agency (FEMA) Including a 300' Potential Review Trigger Distance.
- 2) Wa. Dept. of Natural Resources Hydrography Database, Types 1 thru 5, Including a 65' Potential Review Trigger Distance.
- 3) Pierce County Draft Floodplain Data Including a 300' Potential Review Trigger Distance.
- 4) Pierce County Supplemental Floodplain Data Including a 300' Potential Review Trigger Distance.
- 5) Channel Migration Zone Database developed by GeoEngineers, Inc. for Pierce County Public Works & Utilities, Water Programs Division.

**Notes:**

- 1) FIRM data is for overview purposes only. For administering the National Flood Insurance Program, please see the original FIRM map series.
- 2) Regulated areas also include areas within 5 vertical feet from the base flood elevation and from the ordinary high water mark of an identified natural watercourse.

-  Comp. Urban Growth Area Boundary
-  Graham Community Plan Boundary

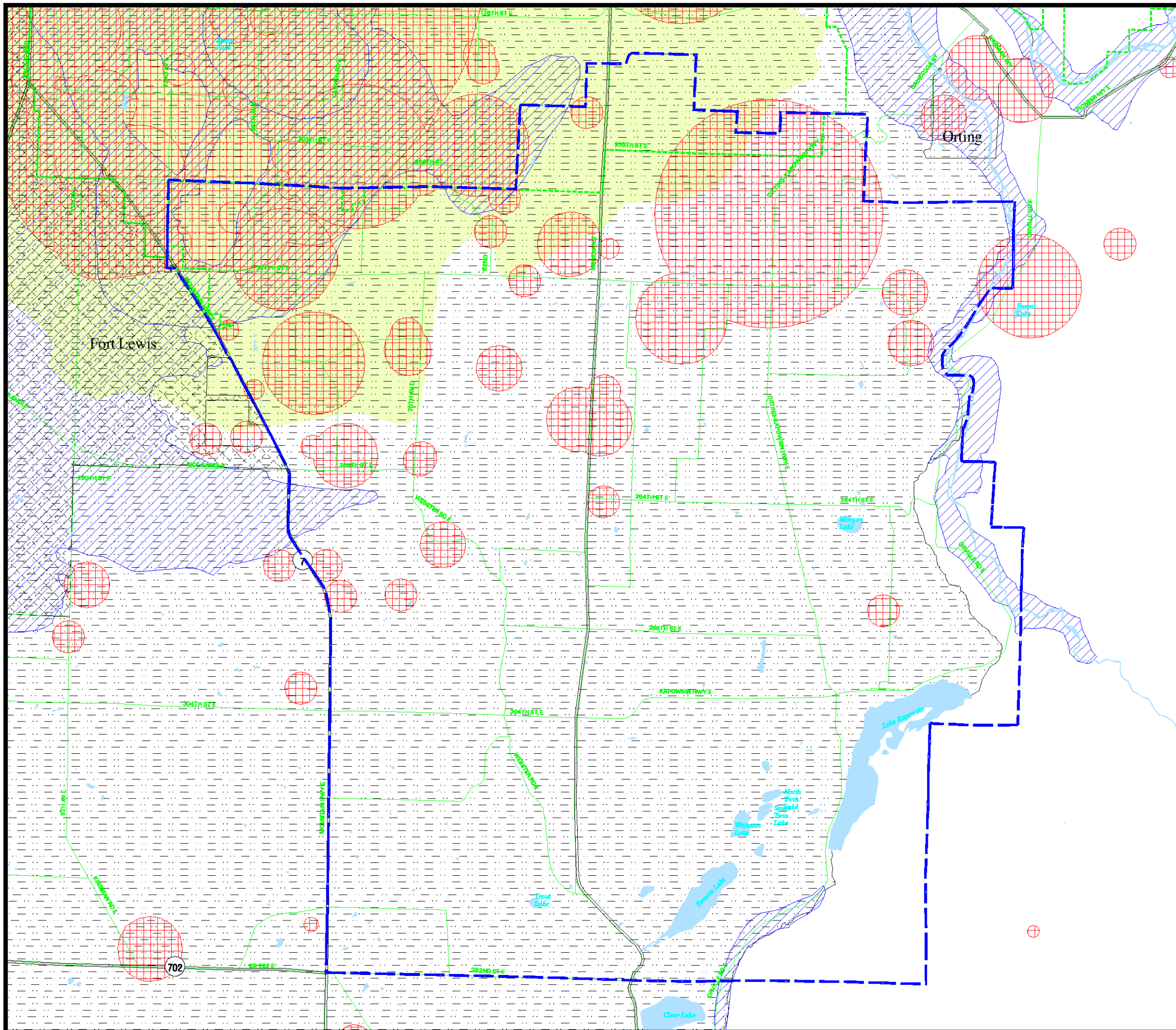


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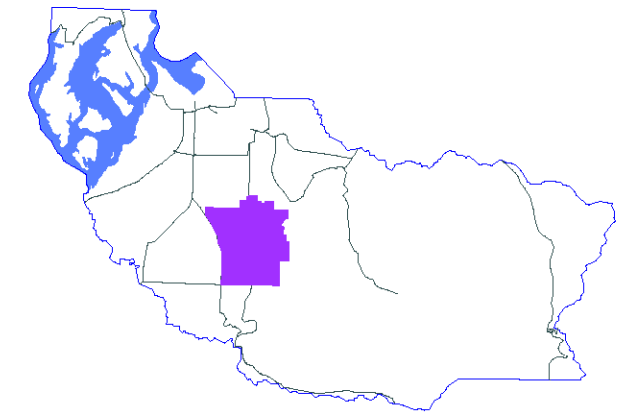
Plot Date: December 07, 2005

# Graham Community Plan









## Pierce County, Washington





## Aquifer Recharge Areas

-  Clover/Chambers Creek Aquifer
-  DRASTIC Zones: 180 or higher
-  Wellhead Protection Area
-  Sole Source Aquifer

**Notes:**  
 Aquifer Recharge Areas include land located within any of the following:  
 1. The Clover/Chambers Creek Upper Aquifer Basin.  
 2. The boundaries of the two highest DRASTIC zones (rated 180 or higher).  
 3. The Wellhead Protection Area defined by ten year time of travel.

**Sources:**  
 Tacoma-Pierce County Health Dept., Waste and Water Section Bulletin No. 1;  
 Map of Ground Water Pollution Potential (DRASTIC Index), National Well Association;  
 Map of Ground Water Quality Problem Areas & Associated Sensitivity,  
 Clover/Chambers Creek Basin Ground Water Mgmt. Program & EIS, Brown & Caldwell, 1980;  
 Sole Source Aquifer, Environmental Protection Agency, District 10.

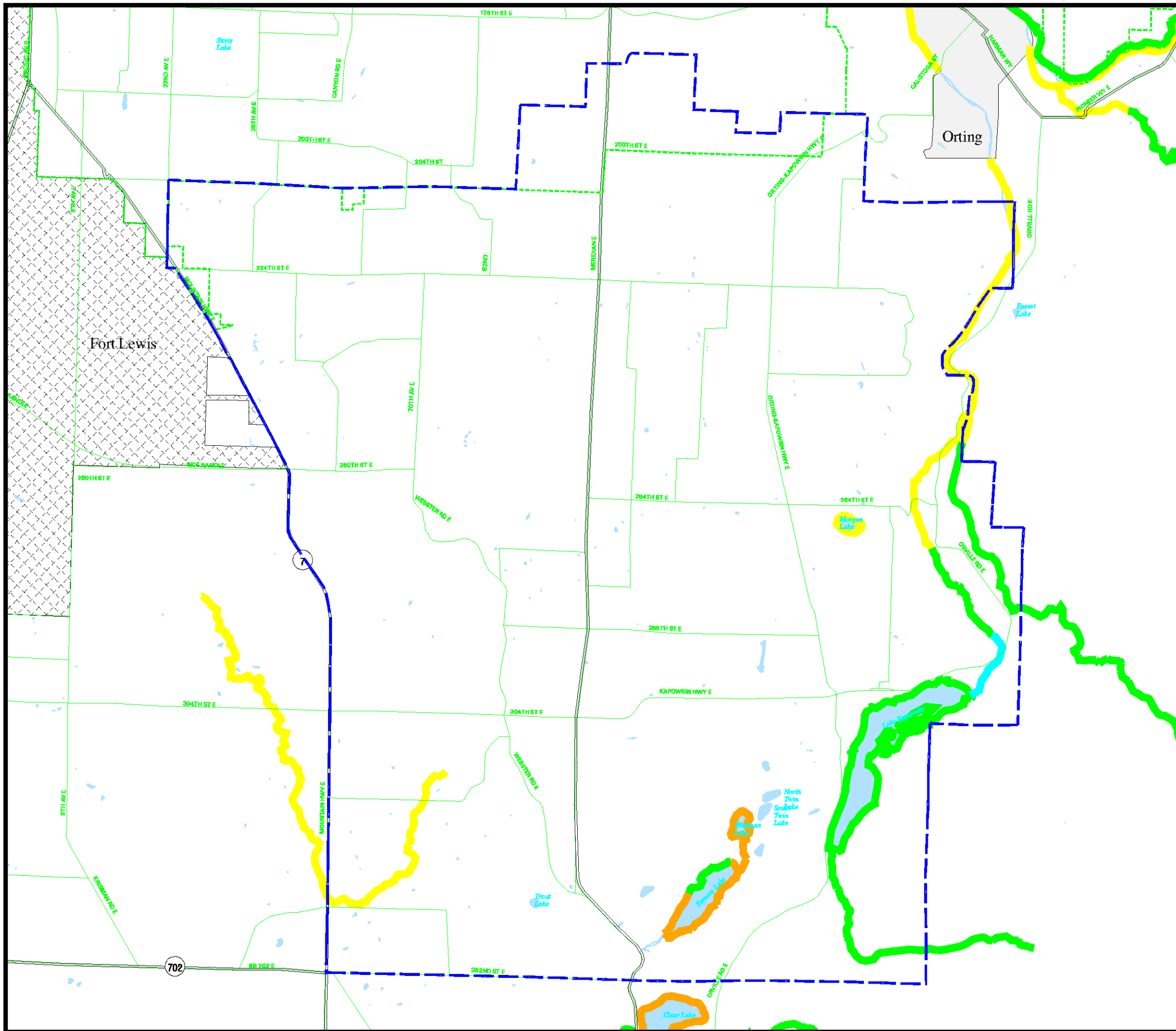
-  Comp. Urban Growth Area Boundary
-  Graham Community Plan Boundary



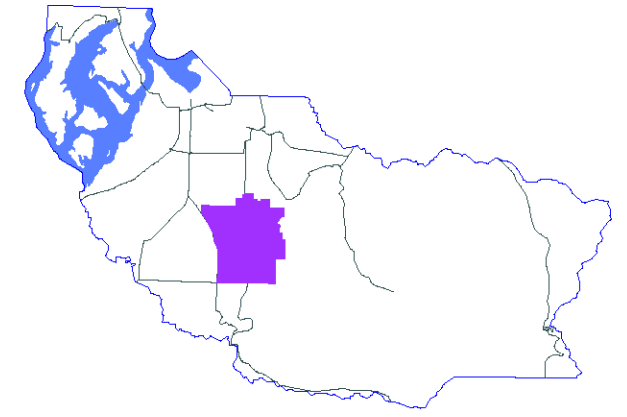
Department of Planning and Land Services

Plot Date: December 06, 2005






# Graham Community Plan



**Pierce County, Washington**





**Shoreline Environments**

-  Urban
-  Residential Rural
-  Rural
-  Conservancy
-  Natural

Source: Shoreline Master Program for Pierce County

Adopted March 4, 1975

-  Comp. Urban Growth Area Boundary
-  Graham Community Plan Boundary



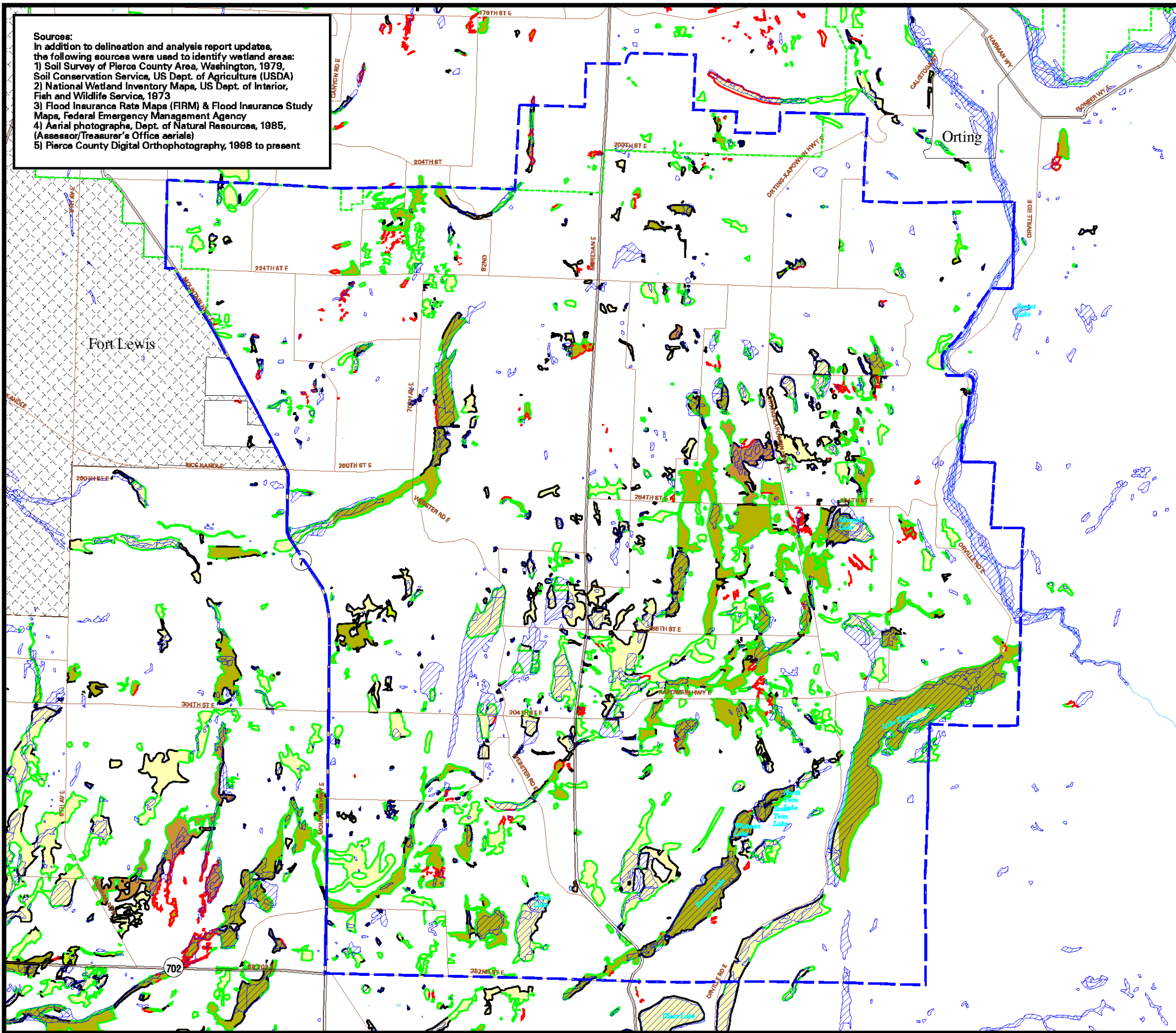
Department of Planning and Land Services

Plot Date: December 07, 2005

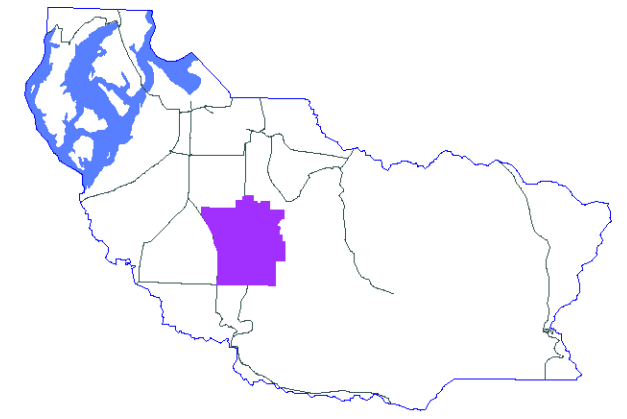
**Graham  
Community Plan**







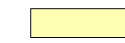
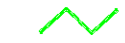


Sources:  
 In addition to delineation and analysis report updates, the following sources were used to identify wetland areas:  
 1) Soil Survey of Pierce County Area, Washington, 1979, Soil Conservation Service, US Dept. of Agriculture (USDA)  
 2) National Wetland Inventory Maps, US Dept. of Interior, Fish and Wildlife Service, 1973  
 3) Flood Insurance Rate Maps (FIRM) & Flood Insurance Study Maps, Federal Emergency Management Agency  
 4) Aerial photographs, Dept. of Natural Resources, 1985, (Assessor/Treasurer's Office aeriels)  
 5) Pierce County Digital Orthophotography, 1998 to present



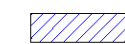


## Pierce County, Washington



### County Wetland Inventory

-  Category I Wetland
-  Category II Wetland
-  Category III Wetland
-  Category IV Wetland
-  Wetland (No Category)
-  Unverified Boundary
-  Verified Boundary
-  Delineated & Surveyed Boundary

### National Wetland Inventory

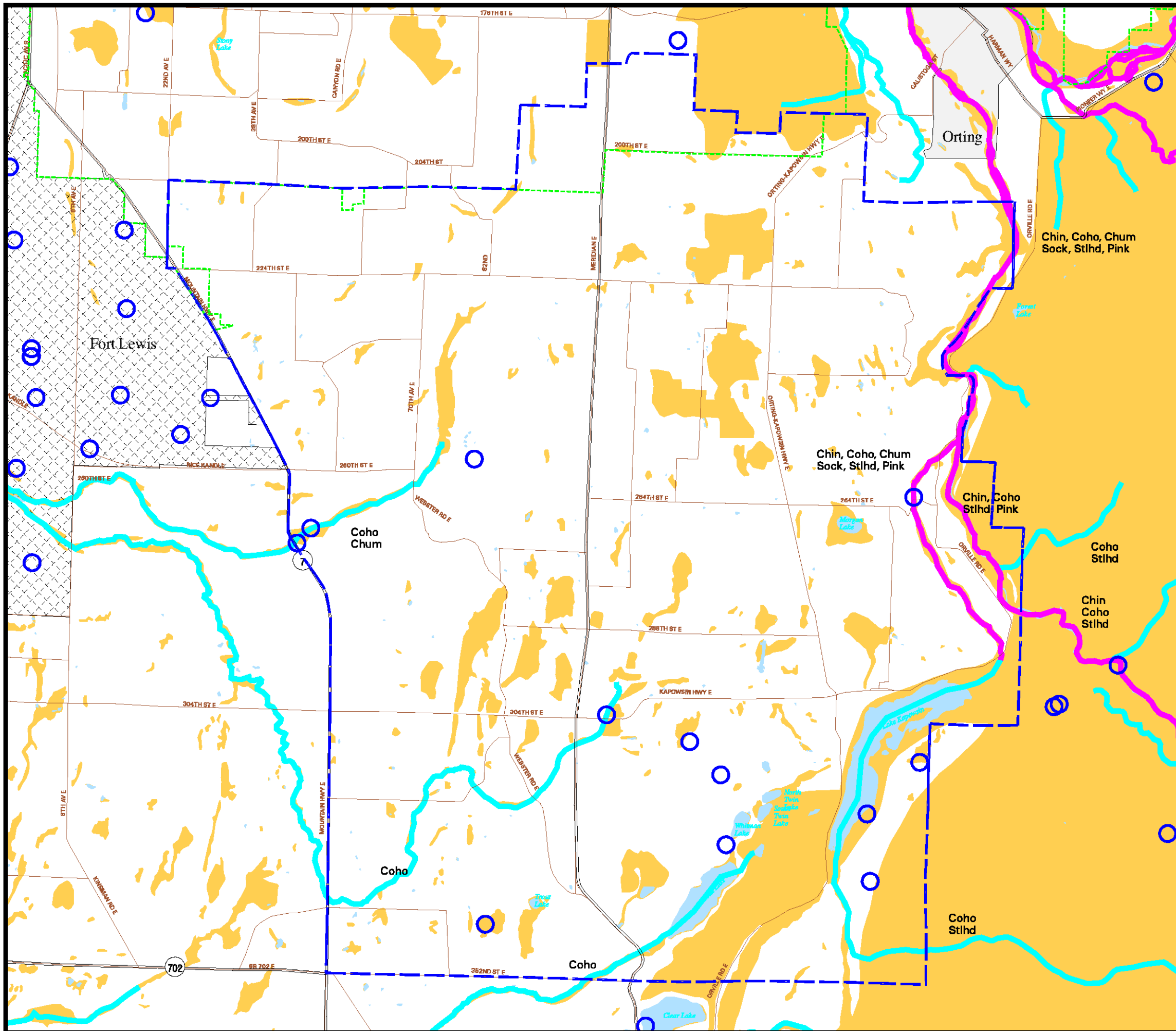
-  NWI Wetland
-  Comp. Urban Growth Area Boundary
-  Graham Community Plan Boundary



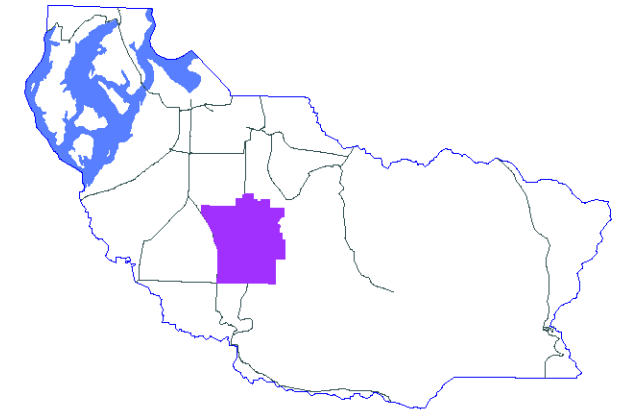
Department of Planning and Land Services

Plot Date: February 07, 2006





# Graham Community Plan



**Pierce County, Washington**





**Fish & Wildlife Resources**

-  Priority Habitat for Wildlife
-  Known Chinook Presence
-  Other Salmonid Presence
-  Wildlife Locations, Including Mountain Quail, Osprey, and Reticulate Sculpin

**Salmonid Source:**  
Washington State Department of Fish and Wildlife (WDFW) Streamnet, and the Update that WDFW coordinated in March, 1999. This data should be regarded as an interim knowledge base.

**Wildlife Source:**  
Washington State Department of Fish and Wildlife (WDFW) Wildlife Heritage Database.

**Priority Habitat Source:**  
Washington Department of Fish & Wildlife Priority Habitats and Species Digital Database.

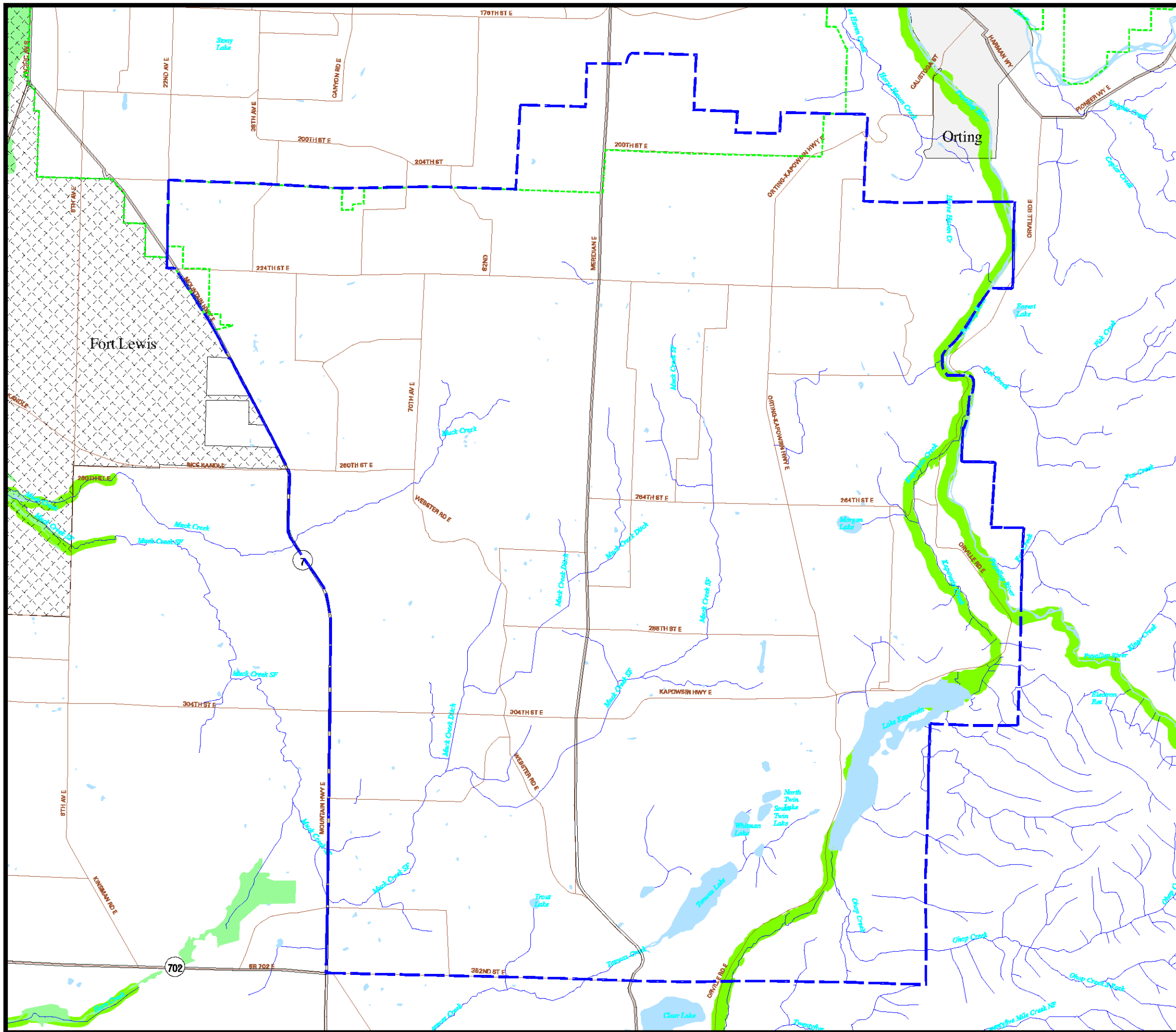
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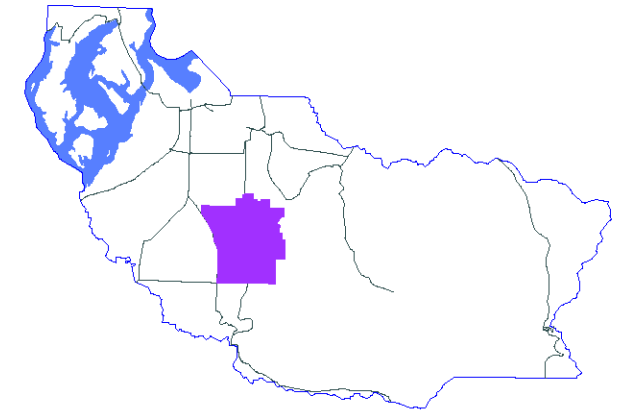
Department of Planning and Land Services

Plot Date: December 06, 2005

**Graham Community Plan**



## Pierce County, Washington



## Biodiversity Network

- Biodiversity Management Area
- Biodiversity Corridors

Source:  
 A Biodiversity Plan for Pierce County, Washington  
 Pierce County GAP Application Pilot Project  
 Department of Urban Design and Planning  
 Remote Sensing Applications Laboratory  
 University of Washington, January 2000;  
 as amended, June 2004.

Biodiversity is defined as "the variety of life and its processes. It includes the variety of living organisms, the genetic differences among them, the communities and ecosystems in which they occur, and the ecological and evolutionary processes that keep them functioning, yet ever changing and adapting." (Noss & Cooperrider - 1994).

- Comp. Urban Growth Area Boundary
- Graham Community Plan Boundary



Department of Planning and Land Services

Plot Date: April 19, 2006

## Graham Community Plan



# Chapter 5: Economic Element

## INTRODUCTION

Economic development refers to actions of the public and private sector which encourage the creation or continued existence of a stable employment and tax base. A strong local employment base provides an opportunity for plan area residents to earn a living in their communities which, in turn, supports local businesses generating additional tax revenues that support community needs. Having a strong local employment base also reduces the pressure on our regional transportation system.

Economic development actions can either be broad or targeted towards specific types of businesses, specific wage levels, active recruitment of businesses that offer goods and services missing in the community, and enhancement to existing businesses and industries. Targeting actions to ensure adequate areas for commercial and industrial development, preserve natural resource industries, and protect home-based businesses are economic development strategies that can be employed as a means of generating economic growth in specific areas of the plan area.

## DESCRIPTION OF CURRENT CONDITIONS

### WORK FORCE

#### EDUCATION LEVEL

The level of educational attainment within the plan area is similar to that found throughout the rest of Pierce County. The highest percentages of people 25 years or older have either a high school diploma or some college with no degree. The population with an Associates degree is slightly higher than the County average; while a smaller proportion of individuals have more advanced degrees (see Table F-19).

**Table F-19: Education Level for Age 25+**

Level of Education	Graham #	Graham %	Pierce County #	Pierce County %
<b>Population age 25+</b>	<b>22,400</b>		<b>442,665</b>	
8th grade or less	487	2.17	14,874	3.36
9th – 12th , no diploma	2,404	10.73	43,251	9.77
High school diploma	7,825	34.93	131,810	29.78
Some college, no degree	6,682	29.83	125,820	28.42
Associates degree	1,840	8.21	35,749	8.08
Bachelors degree	2,421	10.81	60,536	13.68
Masters degree	489	2.18	20,620	4.66

Level of Education	Graham #	Graham %	Pierce County #	Pierce County %
Professional degree	185	0.83	7,228	1.63
Ph.D.	67	0.30	2,777	0.63

Source: U.S. Census, 2000

## OCCUPATIONS

The diversity of occupations found within the plan area is similar to the rest of Pierce County. Over 50 percent of the population within the plan area who are 16 years or older work in occupations related to management, professional services, sales or office work. The smallest percentage of the work force participates in natural resource (farming, fishing and forestry) industries. The number of people who work in construction, extraction and maintenance occupations is significantly higher within the plan area (see Table F-20).

**Table F-20: Occupations for Age 16+**

Occupation Categories	Graham #	Graham %	Pierce County #	Pierce County %
<b>Population age 16+</b>	<b>16,878</b>		<b>314,158</b>	
Management, Professional & Related	4,146	24.56	94,546	30.10
Service	2,448	14.50	51,126	16.27
Sales & Office	4,450	26.37	84,105	26.77
Farming, Fishing, & Forestry	132	0.78	1,683	0.54
Const., Extraction & Maintenance	2,742	16.25	35,334	11.25
Production, Transp. & Material Moving	2,960	17.54	47,364	15.08

Source: U.S. Census, 2000

## LABOR FORCE

The majority of people, age 16 or older, who live within the plan area are employed as civilians. The population within the plan area who are either employed in the military or not participating in the labor force is less than the average for Pierce County and the number of unemployed is the same (see Table F-21).

**Table F-21: Labor Force Participation**

Labor Force Categories	Graham #	Graham %	Pierce County #	Pierce County %
<b>Population age 16+</b>	<b>26,132</b>		<b>531,215</b>	
In armed forces	248	0.95	16,847	3.17
Civilian employed	16,878	64.59	314,158	59.14
Civilian unemployed	1,065	4.08	21,672	4.08
Not in labor force	7,941	30.39	178,538	33.61

Source: U.S. Census, 2000



## INCOME

The average median household income within Pierce County is \$46,807 and \$54,716 within the plan area, which is approximately \$8,000 a year higher than Pierce County as a whole. The number of people earning wages from self-employment is higher within the plan area than the average for Pierce County, perhaps reflective of those employed in the construction industry. Individuals claiming wages from social or supplemental security is significantly less within the plan area, while other sources of income are comparable between the plan area and the rest of the County (see Table F-22).

**Table F-22: Household Sources of Income**

Income Sources*	Graham #	Graham %	Pierce County #	Pierce County %
<b>Total Households</b>	<b>12,007</b>		<b>260,897</b>	
Wage & Salary	10,436	86.92	208,307	79.84
Self-employment	1,686	14.04	28,775	11.03
Interest, Dividends, Rent	3,657	30.46	86,652	33.21
Social Security	1,900	15.82	57,023	21.86
Supplemental Security	335	2.79	11,436	4.38
Public Assistance	494	4.11	12,364	4.74
Retirement	2,144	17.86	49,140	18.84
Other	2,199	18.31	46,526	17.83

\*Block Group averages  
Source: U.S. Census, 2000

## TRAVEL TIME TO WORK

The majority of the work force within the plan area spends 30 minutes or more commuting to work indicating that the plan area is a "bedroom" community to more metropolitan areas. A small percentage of people within the plan area work at home and have no travel time which could reflect natural resource industries such as agriculture or home-based businesses (see Table F-23).

**Table F-23: Commute Time to Work**

Commute Time	Total	Percent
<b>Total workers age 16+</b>	<b>16,203</b>	
None, work at home	678	4.18
Under 5 minutes	203	1.25
5 – 9 minutes	395	2.44
10 – 14 minutes	882	5.44
15 – 19 minutes	1,097	6.77
20 – 24 minutes	1,492	9.21

Commute Time	Total	Percent
25 – 29 minutes	924	5.70
30 – 34 minutes	2,815	17.37
35 – 39 minutes	1,019	6.29
40 – 44 minutes	1,301	8.03
45 – 59 minutes	3,174	19.59
60 – 89 minutes	1,903	11.74
90+ minutes	998	6.16
<b>10 minutes or less</b>	<b>1,276</b>	<b>7.88</b>
<b>More than 30 minutes</b>	<b>11,210</b>	<b>69.18</b>
<b>More than 45 minutes</b>	<b>6,075</b>	<b>37.49</b>

Source: U.S. Census, 2000

## EMPLOYMENT

### SIZE OF FIRMS

Within the plan area, most private sector businesses employ 10 or fewer employees, with relatively few firms employing 25 or greater people. As a contrast, most government and education related employers have greater than 50 employees (see Table F-24).

**Table F-24: Size of Firms**

Firm Categories	Number of Employees	Number of Firms	Average Employees per Firm
<b>Private Firms</b>			
Less than 10 employees	874	454	1.9
10 – 24 employees	418	28	14.9
25 – 49 employees	136	4	34.0
50+ employees	560	6	93.3
<b>Government &amp; Education</b>			
Less than 10 employees	16	3	5.3
10 – 24 employees	0	0	0.0
25 – 49 employees	91	2	45.5
50+ employees	820	9	91.1
<b>Total</b>			
Less than 10 employees	890	457	1.9
10 – 24 employees	418	28	14.9
25 – 49 employees	227	6	37.8
50+ employees	1380	15	92.0

Source: Washington State Employment Security Department for 2001

## INDUSTRY EMPLOYMENT

Information from March, 2003 quarterly employer's reports show that Construction is the largest industry sector in Graham in terms of both number of employers and number of people employed. Second in terms of number of firms is Other Services, which includes a range of businesses from repairs and religious activities to laundry and personal care. Second in terms of employment is Retail Trade (see Table F-25).

**Table F-25: Private Wage and Salary Covered Employment**

NAICS	Industry	Employers	Employment
11	Agriculture, Forestry, Fishing & Hunting	10	34
21	Mining	*	*
22	Utilities	*	*
23	Construction	123	425
31-33	Manufacturing	16	131
42	Wholesale Trade	13	73
44-45	Retail Trade	30	321
48-49	Transportation & Warehousing	16	63
51	Information	*	*
52	Finance & Insurance	5	25
53	Real Estate, Rental & Leasing	8	16
54	Professional, Technical & Scientific	11	38
55	Management of Companies & Enterprises	-	-
56	Admin. & Support and Waste Management & Remediation Serv.	21	68
61	Educational Services	*	*
62	Health Care & Social Services	18	193
71	Art, Entertainment & Recreation	8	66
72	Accommodation & Food Services	15	137
81	Other Services	120	202
Total		421	1,842

Source: Washington State Employment Security Department

\* Data suppressed to protect confidentiality is included in the totals.

## COMMERCIAL AND INDUSTRIAL LANDS

Industrial and commercial zoned lands provide areas for economic development within the plan area. The Pierce County Comprehensive Plan designates lands for industrial and commercial uses throughout the plan area and the County. The Land Use Element – Description of Existing Conditions provides a more detailed overview on the status of vacant and redevelopable commercial and industrial lands within the plan area.

## DESCRIPTION OF DESIRED CONDITIONS

### GENERAL

The economic goal for the Graham community plan area is to provide opportunities for businesses to successfully locate within the plan area, at locations and a scale appropriate to the envisioned rural character. Many elements are required to make a business successful. Companies must be adequately capitalized, have competent management and must produce a product or service that is in demand. The elements necessary for businesses to flourish in Graham include:

- Providing a market sufficient for the trading of goods and services
- Enacting a regulatory environment that is predictable, timely and easy to understand
- Developing a tax structure that doesn't preclude operating a business
- Adopting a "business friendly" attitude in government
- Building adequate public infrastructure to support market growth
- Designating a sufficient quantity and quality of locations for new businesses

### NATURAL RESOURCE INDUSTRIES

Graham is a rural community with a rich heritage based on natural resources. The rural character should be preserved and viewed as an economic opportunity. That is best achieved by promoting and facilitating forestry and agricultural uses. Some incentives to encourage natural resource industries include providing tax reductions and transfer of development rights. Existing agricultural and forestry uses should be protected from new development through title notification requirements and right to farm provisions. Finally, marketing opportunities such as a farmers market should be explored as a venue for locally produced agricultural commodities.

### HOME OCCUPATIONS AND COTTAGE INDUSTRIES

Home occupations and cottage industries are deeply imbedded in the fabric of this rural business community. When the entrepreneurial spirit is nurtured, the result is innovation in products and services that represent great economic opportunities. Often that innovation is "home grown." At the same time, home-based business should be harmonious with the rural character of the community. Development standards should allow for home-based businesses and also provide guidelines for when these businesses should relocate into a commercial or industrial area.

### TOURISM

Tourism can provide significant economic opportunities. The goal of keeping Graham's rural character intact by accentuating forestry and agricultural uses and natural amenities is compatible with providing recreational tourist activities. New tourism related opportunities

could be developed in conjunction with the city of Tacoma's "Train to the Mountain" project. Transportation facilities could be provided to companion destinations such as Northwest Trek and Pioneer Farm, and Lake Kapowsin. Other facilities could be added that could support tourism including expanding park and recreational facilities, building centers or exhibition areas for arts and crafts, and increasing the number lodging and dining businesses such as Bed & Breakfasts. The local Chamber of Commerce and local business associations could help promote tourism within the greater Graham area.

## COMMUNITY IMAGE

The design and upkeep of the built environment can have a dramatic impact on how the character of a community is perceived. In order to realize the full commercial potential within the plan area, Graham must project an image that is inviting to new businesses and the traveling public. Businesses and signage should be designed and integrated to provide a sense of community and project a rural atmosphere. Local business associations could promote activities that foster a sense of community, which in turn could attract tourism.

## COMMERCIAL CENTERS

To maintain a livable community, there must be an appropriate balance between business and residential properties. In order for that to occur, there must be a sufficient amount of land designated for commercial and industrial development. Installation of necessary infrastructure must be timed to keep pace with proposed development in commercial centers. The amount of revenue needed to support new services and capital improvements should be allocated to support anticipated commercial and industrial development.

## ECONOMIC DEVELOPMENT POLICIES

### GOALS

Provide opportunities for businesses to successfully locate in the plan area at locations and a scale appropriate to the rural character envisioned for the area.

### NATURAL RESOURCE INDUSTRIES

- GOAL GR EC-1** Encourage agricultural and forestry industries within the community.
- GR EC-1.1** Encourage retention of properties of sufficient size to make agriculture/forestry economically feasible.
- GR EC-1.2** Ensure agricultural uses are allowed broadly within the plan area.
- GR EC-1.3** Develop marketing opportunities for agricultural products, such as farmers markets within and outside the community, cooperative marketing and purchasing, education on the business of agriculture, promotion of subscription farms, etc.



GR EC-1.4 Require title and plat notification of lands adjoining natural resource uses acknowledging the presence of these uses.

## TOURISM

GOAL GR EC-2 Develop and promote tourism consistent with rural community goals, infrastructure, and growth patterns of the community.

GR EC-2.1 Conduct an inventory of public access points to the many lakes and waterways within Graham to determine the best places for environmentally suitable aquatic recreation.

GR EC-2.2 Develop themed signage and clearly mark public access points to lakes and waterways.

GR EC-2.3 Develop tourism opportunities in conjunction with the Train to the Mountain.

GR EC-2.3.1 Approach Tacoma Rail about developing a terminal for the Train to the Mountain, and determine the feasibility of creating a commercial district, farmers market, or park around the station.

GR EC-2.3.2 Provide a shuttle system to transport visitors from the train station to Northwest Trek and Pioneer Farm.

GR EC-2.4 Support the Rail and Trail effort underway to build a trail the length of the Tacoma Rail route from Tacoma to Mount Rainier.

GR EC-2.5 Develop destination facilities such as a rowing center on Lake Kapowsin or park facilities at Lincoln Tree Farm with interpretive presentations of the working forest.

GR EC-2.6 Promote the arts through art shows, exhibits, galleries, etc.

GR EC-2.7 Promote family activities such as camping, petting farms, paint ball, etc.

GR EC-2.8 Increase the number of lodging and dining facilities.

GR EC-2.9 Provide information to the touring public on recreational opportunities in Graham.

GR EC-2.10 Partner with the Chamber of Commerce and local business associations to help promote Graham businesses to the touring public.

GR EC-2.11 Evaluate and address zoning and development regulations that preclude establishing lodging, dining, and other tourist-related services.

GR EC-2.12 Establish commercial areas in clusters to enhance the visitor experience.

---

## COMMUNITY IMAGE

GOAL GR EC-3 Integrate design of business and commercial uses to help maintain the rural character of Graham.

GR EC-3.1 Support activities that foster a sense of community.

- GR EC-3.2 Orient buildings in commercial developments to create a self-contained community feel.
- GR EC-3.3 Establish citizen patrols and neighborhood watches with the support of the Pierce County Sheriff's Department.
- GR EC-3.4 Communicate the shared vision of Graham throughout the community.
- GR EC-3.5 Allow for adequate commercial development primarily located within designated commercial areas to provide a balance between the residential and commercial tax base.

## IMPLEMENTING ACTIONS

The following list of actions needs to be completed in order to implement the policies contained within this plan. They are arranged according to the timeframe within which each should be completed: short, medium, or long term. Short-term actions should occur within one year of plan adoption. Mid-term actions should be completed within 2-5 years. Long-term actions should be completed within 5-10 years of plan adoption. The entity or entities responsible for leading the effort to complete the action item is listed in parenthesis following the action. Actions are assigned to the Land Use Advisory Commission (LUAC), Pierce County Planning and Land Services (PALS), Pierce County Economic Development (ED), Pierce County Parks and Recreations (Parks), Pierce County Public Works & Utilities (PWU), and Tacoma-Pierce County Health Department (TPCHD).

### SHORT TERM ACTIONS (UPON PLAN ADOPTION TO 1 YEAR)

1. Amend Title 18I, Natural Resource Lands to require title and plat notification for lands adjoining agricultural uses acknowledging the presence of the agricultural use and that continuation of the agricultural activities may result in impacts to new residents. (PALS, Farm Advisory Commission)
2. Amend Title 18J, Design Standards and Guidelines to incorporate design standards and guidelines for cottage industries. (PALS)

### MID-TERM ACTIONS (1-5 YEARS)

1. Develop and adopt regulations regarding "transfer of development rights." (PALS)
2. Work with local agencies and groups to promote agricultural activities such as: cooperative marketing and purchasing of agricultural products, subscription farms, and education on the business of agriculture. (PALS, Graham Business Association, Farm Bureau, Farm Advisory Commission, WSU Cooperative Extension Office)
3. Amend Title 18A, Zoning to incorporate operational standards that serve as a guide to when a home-based business should relocate into a designated commercial area. (PALS, Economic Development)

4. Work with local agencies and groups to promote the Current Use Assessment Program for productive farm and agricultural lands and timberlands. (PALS, A/T Office, Farm Bureau, Farm Advisory Commission, WSU Cooperative Extension Office)
5. Conduct an inventory of public access points to waterbodies and watercourses within the plan area to determine best locations for aquatic recreation areas. (PALS, Parks)
6. Coordinate with local agencies and groups to develop Train to the Mountain facilities. (PALS, C&E Development, Graham Business Association)
7. Conduct a study to determine the amount of revenue needed to support needed services and desired capital improvements versus the anticipated revenue generated by various development patterns. (PALS, C&E Development, Graham Business Association)
8. Review current standards contained in development and construction and infrastructure regulations to determine if the thresholds for home occupations, cottage industry I, and cottage industry II categories are appropriate and reconcile any contradictions between residential and commercial character; amend as necessary. (PALS)

#### LONG TERM ACTIONS (5-10 YEARS)

1. Install signage to clearly mark public access points to waterbodies and watercourses within the plan area. (PALS, Parks, PWU)
2. Develop a rowing center on Lake Kapowsin. (PALS, Parks, C&E Development, Graham Business Association)
3. Work with local agencies and groups to develop a farmers market within the plan area. (PALS, C&E Development, Graham Business Association, Farm Bureau, Farm Advisory Commission, and Washington State University Cooperative Extension Office)
4. Work with local agencies and groups to promote tourism related industries (e.g., expand lodging and dining opportunities and develop tourism related brochures) and arts and crafts related industries (e.g., art shows, exhibits, galleries, and markets) within the plan area. (PALS, C&E Development, Graham Business Association)

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# Chapter 6: Facilities and Utilities Element

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## INTRODUCTION

The Facilities and Services Element articulates needs for facilities and services to implement the visions and goals of the communities plan. Facilities and services are collectively considered infrastructure and may include public or privately funded projects. Policy statements regarding infrastructure provide direction to investors and decision-makers about investments desired and needed by the community. This element also prioritizes some of the projects and may suggest potential funding sources to acquire or construct facilities or provide services.

## DESCRIPTION OF CURRENT CONDITIONS

### CAPITAL FACILITIES PLANNING IN PIERCE COUNTY

The Pierce County Comprehensive Plan contains a Capital Facilities Element, often referred to as the Capital Facilities Plan (CFP). The CFP is a six-year plan for identifying and financing countywide capital improvements that support the County's current and future population and designated land uses. The CFP is based on projected needs for capital facilities for the next 20 years, given current trends and expenses and is updated annually. Application of level of service (LOS) standards is a method for identifying needed capital improvements. LOS standards state the acceptable quantity and quality of a facility or service; expressed as unit of population, housing, acreage, square footage, gallons, vehicles per hour, waiting time, or similar unit of measurement.

### SEWER AND WASTEWATER TREATMENT

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#### SEWER COLLECTION AND WASTEWATER TREATMENT FACILITIES SERVING THE PLAN AREA

Approximately 13.5% of the Graham Community Plan area lies within the Chambers Creek Regional Wastewater Treatment Plant (WWTP) service area as identified in the Unified Sewerage Plan, 2001, (4.5% within urban service area and 9.0 % rural service area). The remainder of the Graham Community Plan area lies outside of any jurisdictions' sewer service area.

Pierce County currently provides sewer service to 146 acres (568 properties) within the urban service area and 273 acres (901 properties) within the rural service area. Existing sewerage flow from the Graham Community Plan area accounts for approximately 0.3 million gallons per day (MGD). Existing wastewater collection facilities within the Graham Community Plan area consists of approximately 11.3 miles of 8- through 18-inch pipeline, (3.1 miles in the urban service area and 8.2 miles in the rural service area). Current sewer customers in the rural service area connected to the sewer system prior to 1994 or had entered into a Binding Agreement executed prior to implementation of Growth Management Plan.

The Chambers Creek Regional Wastewater Treatment Plant (CCRWWTP) service area encompasses approximately 95,345 acres (149 square miles) of land. The service area includes the Cities of Lakewood, DuPont/Northwest Landing, University Place, Milton, the Town of Steilacoom, as well as the Tacoma Western Slopes area (WSLP), and the unincorporated communities of South Hill, Parkland, and Spanaway. The CCRWWTP is currently rated at 28.7 million gallons per day (MGD) at average daily flow of 16.7 MGD (2005). Equipment at the WWTP is periodically upgraded or fine-tuned to keep pace with performance requirements established by the State of Washington through the NPDES (National Pollution Discharge Elimination System) permit. Each year's capital improvement program includes equipment upgrades. Treatment plant operators are constantly refining processes to achieve the maximum reduction of suspended solids, biological oxygen demand, chlorine, and nutrients in treated wastewater being discharged to South Puget Sound.

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#### OVERVIEW OF CURRENT SEWER AND WASTEWATER TREATMENT PLANS, POLICIES AND REGULATIONS

Sewer Service in the Graham Community Planning area is governed through the *Unified Sewer Plan for the Pierce County Wastewater Utility, 2001 and Chapter 13 of the Pierce County Code*. In addition, the Pierce County Comprehensive Plan policies play an important role in which properties can receive sewer service in the Graham Community Plan area. As part of a strategy to channel urban intensity development into designated urban growth areas, the Pierce County Comprehensive Plan directs that sanitary sewers be provided almost exclusively to urban areas. Since portions of the Pierce County Wastewater Utility's pre-existing service area, designated pursuant to Chapter 36.94 RCW, was classified "rural" pursuant to Chapter 36.70A RCW when the Comprehensive Plan was adopted, specific policies had to be adopted to handle sewer service issues in these rural areas.

The Comprehensive Plan limits when sewer connections may occur, in rural areas, to the following instances:

- Where sanitary sewer service will remedy ground water contamination and other health problems by replacing on-site sewer (septic) systems;
- Where a formal binding agreement to service an approved planned development was made prior to the establishment of an Urban Growth Area (i.e., where there is a binding sewer agreement.); and
- Where current connections exist. [Current connections paid for treatment and conveyance system capacity that obligates the sewer utility to continue to provide service as long as the property owner or resident abides by the sewer regulations.]

Interceptors constructed within and through areas designated "Rural" cannot be made available for individual connections except as provided for in the County Comprehensive Plan.

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#### LEVEL OF SERVICE STANDARDS

Level of service for sanitary sewers is established in the Capital Facilities Element of the Comprehensive Plan. LOS was set at 220 gallons per residential equivalent (RE), (i.e., in planning for collection system and treatment capacity, one single-family residence is expected to contribute 220 gallons of wastewater per day). A multifamily residence is 0.83 RE.



Commercial and industrial land uses are expected to contribute 1,000 gallons of wastewater per day per acre.

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#### PROPOSED SEWER SERVICE FOR THE PLAN AREA

The Unified Sewer Plan identifies three major conveyance system improvements within the Graham Community Plan area; none of which are on the current Six-Year Wastewater CIP. (See Map F-37: Sewer Service - Existing Sewer Lines) The Muck-Kapowsin Trunk and Elk Plain Trunk both fall within the rural service area and will not be considered for the Six-Year Wastewater CIP until a change occurs in the land-use designation of surrounding properties or unless sewers are necessary to remedy ground water contamination and/or other health problems. The majority of all system expansion, within the urban service area, will occur by means of developer extension. Only one remaining binding agreement remains in the Graham Community Plan area, (Rock Family Trust Binding Agreement property, Parcel #401500-009-0). No other improvements are proposed for the rural service area.

#### DOMESTIC WATER

The majority of the community plan area located within the urban growth area is provided water services by the Rainier View, Southwood/Sound water system, or Firgrove Mutual Water. These systems obtain water from groundwater wells located within their service area and from outside regional water sources via the City of Tacoma and are currently operating under water system plans approved by the Washington State Department of Health.

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#### OVERVIEW OF CURRENT DOMESTIC WATER SUPPLY AND WATER SYSTEM PLANS, POLICIES AND REGULATIONS

Numerous water related plans, programs or processes occur at the State, County, WRIA, or individual water system service area level which address domestic water supplies in some manner, including, the Pierce County Comprehensive Plan, the Pierce County Coordinated Water System Plan, 2001, the Nisqually Watershed Management Plan, October, 2003, and individual water purveyor water system plans. Additionally, numerous regulations impact the provision of water service, including Pierce County land use development regulations and Chapter 173-511 WAC (Instream Resources Protection Program – Nisqually Water Resource Inventory Area 11).

For example, the Pierce County Coordinated Water System Plan requires water systems to plan for growth based upon the land use designations and growth projections contained in the Pierce County Comprehensive Plan. Water system plans are required to be developed and approved by the Washington State Department of Health for water systems meeting specific conditions. The Instream Resources Protection Program (173-511 WAC) has closed several streams in the Nisqually WRIA to further water appropriations, including associated groundwater resources impacting such closed streams. Additionally, water systems must meet local fire flow standards and no new individual wells are allowed within the Pierce County urban growth area, except for special circumstances. Water system plans serve as road maps for the operation of a water system and are required to be consistent with the growth

projections and zoning requirements of the land use authority within the service area. It is through the development of such plans that water systems justify their ability to provide timely and reasonable water service to their exclusive service area.

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#### WATER SYSTEMS SERVING THE PLAN AREA

Domestic water within the Plan area is provided by a combination of individual on-site wells, small Group B water systems and approximately 20-25 Group A water systems. The portion of the plan area located within the urban growth boundary is primarily served by the Rainier View, Southwood/Sound Water System, or the Firgrove Mutual Water System. Due to low density development patterns in the remainder of the plan area, a large portion falls outside the designated service area of any Group A water system and, instead, is considered undesignated in terms of public water service. Within such an area, individual “exempt” wells or small Group B public water systems utilizing an exempt well are most likely to occur in the future. A notable exemption is the Graham Hill Mutual Water Company which provides water service to a large portion of the plan area outside the urban growth area. In other instances, past projects have been developed on Group A water systems; however, in the majority of such cases, the water systems have no plans to expand beyond existing plats. (See Map F-38: Water Systems)

The majority of the Group A water systems operating within the community plan area are not required to develop individual water systems plans. The water systems which do have Washington State Department of Health approved water system plans include: Firgrove Mutual, Rainier View, Southwood/Sound, Graham Hill Mutual Water Company, Sunwood Water System, and El Dorado/Country Water System (a portion of the Valley Water District). Of these, the Graham Hill Mutual Water Company has the most pressing need for new water resources (water rights) to serve anticipated growth.

Outside designated water service areas, wells exempt from the requirement to obtain a water right are expected to provide water service to new growth. However, such an exempt well may not be exempt from the established instream flow rule for the Nisqually WRIA, WAC 173-511. WAC 173-511-070 allows for a single domestic use of water only if the cumulative effects of numerous single domestic uses do not impact the quantity of water available for instream uses. If they do, then only domestic in-house use is allowed if no other source is available.

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#### ISSUES FACING WATER PURVEYORS

Generally speaking, providing a safe, sustainable supply of water to a growing population is getting more and more difficult for water purveyors across the State. Balancing the need for water for people with the needs of fish, wildlife and the natural environment is a major challenge. Water is a finite resource with a growing demand and how we live and use water have significant cumulative impacts on how much water is available and how clean the water is. Educating users of water of this in a typically “wet” environment is a challenge facing water purveyors. The lack of understanding of the interaction between groundwater and streams and, therefore, the lack of general knowledge of how much water is available for additional out of stream uses is a concern as well. Essentially, how to manage the State’s water resources into the future is at issue.

Water purveyors may use and promote water conservation methods as a means of ensuring sufficient water supplies for growth. Conserved water is water that does not have to be purchased or conveyed so it is cost-effective. Water conservation can be frustrated by development regulations and homeowner covenants that require extensive irrigated landscaping and similar features. Water conservation can be enhanced by requiring plumbing fixtures that conserve water, instituting leak detection and correction programs, and by developing strict irrigation and landscaping standards. Care in requiring landscaping that does not demand extensive irrigation for its survival will help as will emphasis in landscaping standards that require on the use of indigenous plant materials and in land clearing regulations that limit the extent of native vegetation removal.

At this time, it can be extremely difficult, if not impossible, to obtain a new water right from DOE due to staffing limitations, lack of needed information and the closure status of streams, among other reasons. How to balance water resource needs into the future, thereby providing water for both instream and out of stream uses, is an important issue facing many areas of the State, including Pierce County and the Graham Community Plan area.

For water systems operating in the urban growth area of the community planning area, the use of available regional water is possible, and is occurring, due to the water systems' ability to intertie with others. Such a solution may not be feasible for more isolated Group A public water systems operating in the community plan area outside the urban growth area, but still facing growth issues despite rural zoning. The implementation of the Nisqually Watershed Management Plan in the cooperative manner in which it was developed could have a positive impact on water systems' ability to obtain new water rights into the future.

## TRANSPORTATION

### OVERVIEW OF CURRENT TRANSPORTATION PLANS, POLICIES, AND REGULATIONS

The planned transportation policies and projects currently adopted for Graham can be traced to the Pierce County Transportation Plan (PCTP), which was adopted in 1992. The PCTP was the result of a four-year intensive public effort to develop Pierce County's first all-encompassing transportation plan that set policies and prioritized transportation improvements for the following twenty years. Six separate Focus Area Advisory Committees (FAACs) were involved in the PCTP process. Portions of the current community plan area are within the boundaries of the Mid-County and South County Focus Areas.

In 1994, the Pierce County Comprehensive Plan was adopted in response to the Washington Growth Management Act (GMA). The Comprehensive Plan incorporated the transportation policies and recommended transportation improvements of the 1992 PCTP. The Comprehensive Plan summarized a newly developed system for coordinating the planning, funding, programming and construction of transportation improvements with future land development. This concept, known as transportation concurrency, continues to play a significant role in completing transportation improvements throughout Pierce County.

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## TRANSPORTATION FACILITIES SERVING THE PLAN AREA

The transportation system within the Graham Community Planning area can generally be described as rural in nature. The roadway network is not a fully developed “grid system,” as is usually the case in urban areas. Many of the roadways are very narrow. There is very limited transit service and very few facilities to accommodate bicycles and pedestrians.

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### ROADS AND HIGHWAYS

The plan area is serviced by two main state route highways (SR 7, Mountain Highway, and SR 161, Meridian). SR 7 is designated as a Scenic and Recreational Highway throughout the entire plan area. The road system along SR 7 has wide shoulders that, for the most part, provide adequate separation to ditches. SR 161 has very narrow shoulders, with ditches right up alongside the travel ways. Many of the County roads are very narrow, with no shoulders and deep ditches running parallel to the travelway. The design of the roadway system within the plan area hinders pedestrian and other types of nonmotorized movement (biking, horseback riding, etc.) In addition, there is an abundance of wildlife within the plan area, which sometimes results in accidents caused from collisions between vehicles and animals, particularly elk and deer.

Over the last several years, the Washington State Department of Transportation (WSDOT) has worked on two Route Development Plans (RDPs) for portions of SR 161 (Meridian) that traverse the plan area. WSDOT commenced a RDP on SR 161 from 234th St. E. south to its intersection with SR 7, in the spring of 2003. In addition, a RDP was completed in the 1990s for SR 161 north of 234th St. E. This RDP recommended widening SR 161 to four lanes plus channelization between 176th St. E. and 234th St. E. Construction on this project has begun and should be completed sometime in 2006.

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### RAIL SERVICES

The Tacoma Rail Mountain Division operates the only railroad line within the Graham Community Plan area. The length of rail line running through the community plan area is approximately 13.5 miles. This is part of 132 miles of track in the Mountain Division. Currently freight is carried on this track between Frederickson, Lewis County, and the Port of Tacoma.

Passengers may be carried on the rail lines in the future.

One possibility is to run a passenger train from Frederickson to connect to the Sound Transit regional rail in downtown Tacoma. An excursion opportunity is a train between Freighthouse Square in Tacoma and the proposed Inn at Park Junction located near Elbe/National. The “Train to the Mountain” is in the planning stages and will require substantial upgrade of track and right-of-way to allow operations at greater than 20 mph.

*Tacoma Rail Mountain Division*

## PUBLIC TRANSPORTATION

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The community plan area is served by Pierce Transit Route 402. Route 402 travels from the Roy 'Y' Park & Ride lot (SR 7 at SR 507) south on SR 7, east on 224th St. E., then north on SR 161. The route continues north to the South Hill Mall Transit Center, Puyallup Sounder rail station, and the Federal Way Park & Ride lot. Service is on an hourly basis on weekdays and weekends. The portion of plan area north of 224th St. E. is also served by the Mid-County Bus Plus service. Bus Plus is a "by request" service that runs on weekdays from 6 a.m. to 9 p.m.

## LAW ENFORCEMENT AND FIRE PROTECTION

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### LAW ENFORCEMENT AGENCIES SERVING THE PLAN AREA

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#### PIERCE COUNTY SHERIFF'S DEPARTMENT

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The Pierce County Sheriff's Department (PCSD) is the primary law enforcement agency for the plan area. There are four patrol districts that serve the area; however, there are not any police stations located in the plan area. The majority of the area is serviced by the Mountain Detachment, Pierce County District 10, which is headquartered in Eatonville. This unit serves a total of 40,195 acres of the plan area. The Foothills Detachment, Pierce County District 12, which is headquartered in Bonney Lake, serves 883 acres of the plan area. The South Hill Precinct, Pierce County District 6, located in South Hill serves 6,571 acres of the plan area. Pierce County District 7 serves the remaining 1,299 acres of the plan area. All of these facilities provide continual, but not exclusive service to the plan area as follows:

- The Mountain Detachment consist of three sergeants, 19 deputies, and an office assistant that provides police services and patrols to the majority of citizens in the plan area.
- The Foothills Detachment consist of three sergeants, 21 deputies, and an office assistant, which provides police services to the areas around Orting, Buckley, and Bonney Lake in addition to a small part of the plan area. The Detachment is located in office space located next to the Safeway in Bonney Lake.
- The South Hill Precinct provides patrol deputies and support, along with property crime detectives, clerical support, the Youth Emergency Services Unit and the Crime Analysis Unit.
- The County-City Building is the location of most of the rest of the PCSD services, including Administration, Civil, Major Crimes Detectives, Forensics, Special Investigations Unit, and the Recruiting and Training sections.

Six detectives are housed at the South Hill Precinct and their primary duty is to investigate property crimes. In addition, 22 detectives and deputies work from the County-City Building in the Criminal Investigations Division. Those people are assigned to a variety of tasks from investigating major crimes (homicide, special assault, arson, etc.) to investigating domestic violence related incidents to crimes involving juvenile suspects to executing felony arrest warrants. The area of responsibility for these resources is the entire unincorporated County (including the plan area), as well as providing contracted services to various cities in Pierce



County. A growing group of undercover investigators is dedicated to drug enforcement issues in Pierce County.

In addition to the above-described services, the plan area benefits from the ability of the PCSD to provide additional special services to its citizens. These special services are made possible by training personnel to perform more than their primary (patrol, investigations) function. These personnel respond to situations on an as-needed basis. These functions include: Air Operations, Clandestine Lab Team, Dive Team, Hazardous Devices Squad, Marine Services Unit, Bicycle Unit, Search and Rescue, SWAT, and Swiftwater Rescue.

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#### WASHINGTON STATE PATROL

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The Washington State Patrol's office is located at 2502 112th St. This office dispatches four detachments to eastern Pierce County covering state highways in the plan area. They respond to a variety of calls for service ranging from standard traffic stops to vehicular accident investigation. The number of troopers in the plan area varies from two to three depending on the calls for service in other areas of Pierce County.

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#### FIRE PROTECTION DISTRICTS SERVING THE PLAN AREA

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The community plan area is serviced by four different fire districts. The plan area contains all of Fire District No. 21 and only one station from the other fire districts: District Six – Station Four, District Fifteen – Station Two, and District Eighteen – Station Three.

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#### PIERCE COUNTY FIRE PROTECTION DISTRICT # 21

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Fire District No. 21 serves an area of approximately 110 square miles. The district responds to over 3,500 calls per year with approximately 72% of the calls related to medical aid. District No. 21 headquarters is at 10012 187th St. E. There are a total of five fire stations in the district, all located within the plan area boundary. The district also owns vacant land located in Frederickson and on 238th and Meridian.

The district offers a variety of services other than fire protection such as CPR and first aid classes and burn regulation information. The district's equipment consists of three medic units, six engines, one ladder, three medic units, two water tenders, one brush truck, eight utility vehicles, one car, and one parade engine. The fire district has 95 employees in the following roles: three commissioners, one administrative chief, one deputy chief, one training captain, one district secretary, one administrative assistant, two secretaries, one data entry clerk, one public educator, three battalion chiefs, six lieutenants, 17 fire fighters, 13 fire fighters/paramedics, 33 volunteer fire fighters, and 10 chaplain personnel.

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#### PIERCE COUNTY FIRE PROTECTION DISTRICT # 18

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Fire District No. 18 has one station in the community plan area (Station 18-3), which serves as the headquarters. This station is located at 19502 Orting-Kapowsin Highway East. The equipment assigned to this station are one engine, one water tender, one medic unit, and two utility vehicles. The station has a full daytime staff of 2-4 people, including one fulltime medic.

There are various classes performed at the station including CPR and AED. Additionally, the station issues burn permits to residents in the area.

#### EATONVILLE FIRE PROTECTION DISTRICT # 15

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Fire District No. 15 has one station in the plan area (Station 15-2), located at 5403 340th St. E. The station provides other services to the community including burn permit and inspections. The district has a part-time Fire Prevention Educator that works within the district. The station's equipment consists of one engine, one water tender, and one medic unit.

#### PIERCE COUNTY FIRE PROTECTION DISTRICT # 6

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Fire District No.6 has one station in the plan area (Station 6-4), located at 3431 224th St. E. The equipment assigned to the station is one engine and one medic unit.

## PUBLIC SCHOOLS

### OVERVIEW OF SCHOOL RELATED PLANS, POLICIES AND REGULATIONS

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The Pierce County Code (PCC), Chapter 41.30 School Impact Fees requires that any school district seeking imposition by the County of an impact fee shall submit a Capital Facilities Plan adopted by the District's Board of Directors. These plans must be updated regularly to maintain at least a six-year forecast of needs and a six-year plan for funding and include the minimum information required by State law and outlined in PCC, 4A.30.010.

The impact fees are intended to help provide school districts with an appropriate proportionate share of the costs of public school capital facilities needed to serve new growth and development. The impact fees are imposed on new single-family and multifamily dwelling units as part of the County's building and land use approval process. The impact fees are determined using a fee calculation by each school district, which may not exceed the Maximum Fee Obligation. The impact fee schedule is adjusted annually through an ordinance that is reviewed concurrently with the County's Capital Facility Plan. PCC, 4A.30.030 includes a School Impact Fee Schedule that outlines the fee calculations and Maximum Fee Obligation for each school district in Pierce County for the years 2005 and 2006.

### SCHOOL DISTRICT FACILITIES SERVING THE PLAN AREA

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The plan area is served by Bethel School District #403, Eatonville School District #404, Orting School District #344, and Puyallup School District #3. (See Map F-39: Public Education)

#### BETHEL SCHOOL DISTRICT

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The Bethel School District includes fifteen elementary schools, five junior high schools, three high schools, and one alternative school. The average full time enrollment for this school year is 17,556 students.

## EATONVILLE SCHOOL DISTRICT

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The Eatonville School District includes three elementary schools, one middle school, and one high school, which serves 10,182 acres of the plan area. The district serves 434 residential dwellings within the plan area. In December 2004 the enrollment was 2,120 with a capacity of 1,795. The district is using portable classrooms to house extra students. No bonds have been passed since 1990 and at this time the district has no plans to modify current structures, with the exception of adding one portable unit at Weyerhaeuser Elementary School.

## ORTING SCHOOL DISTRICT

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The Orting School District includes two elementary schools, one middle school, one high school, and one K-8 partnership school, which serves 2,422 acres of the plan area. The partnership school is conducted within the Gates Foundation Model School Grant. This school provides an alternative for parents of children in either elementary or middle school. Table F-26 provides a breakdown of the student capacity and the student enrollment for the Orting School District. The capacity for each grade was calculated using the OSPI formula for determining the students per square foot allowance.

**Table F-26: Orting School District Capacity and Enrollment**

Grade	Capacity	Enrollment	Shortage
K-2	625	368	257
3-5	608	462	146
6-8	310	494	184
9-12	310	563	253

At this time, the district has no school construction projects currently underway nor any that are specifically planned. Accordingly, the school district is conducting surveys, community forums, and facility committee meetings to obtain input in an attempt to determine viable options for prospective school construction projects, as well as direction and support for successful bond passage. In the last several years, the school district ran two \$19.5 million bonds intended to help pay for a new middle school and extensive upgrades to the existing high school, but it was voted down both times. The biggest challenge for the district is the passage of a bond to generate funding to construct schools on the land owned by the district within city limits.

## PUYALLUP SCHOOL DISTRICT

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The community plan area contains part of the Puyallup School District. This area (only 138 acres) consists of vacant industrial and commercial lands, fire stations, the Lipoma Golf Course, and one mobile home. In 2005, an application was submitted to develop the Lipoma Golf Course into a Planned Development District (PDD) with a total of 1,697 additional dwelling units, which could accommodate an estimated additional 5,278 people.

## PARKS AND RECREATION

### OVERVIEW OF CURRENT COUNTY PARK & RECREATION PLANS, POLICIES, AND REGULATIONS

#### PIERCE COUNTY COMPREHENSIVE PLAN

The Pierce County Comprehensive Plan contains general policies that serve as a guide for future development of regional park and recreation facilities in the areas of the County where a community plan is not in effect. These policies cover a range of issues including responsibility for provision of parks, technical assistance, and location criteria for new parks.

Section 19A.20.090 states that the primary reliance is upon cities and towns and special purpose districts as providers of local facilities and services appropriate to serve those local needs. The location of park and recreation areas is discussed in Section 19A.30.160 which states that new parks must be located on public roads. If a park is located in an urban area, then urban services need to be available. Open space passive recreation parks should be located on land offering significant environmental features. Also addressed in this section are multi-purpose trails, joint venturing, and partnership with others in regional facilities.

Section 19A.30.160 B contains policies on the responsibilities of the County including: limiting taxpayer investment to acquisition; development and maintenance of regional facilities; providing assistance in helping communities identify local park and recreation needs and funding opportunities; and implementing the Capital Facilities Plan element for parks and recreation. Technical assistance for the development, operation and maintenance of local parks and facilities may include technical planning, help in the formation of local recreation service areas, service districts, metropolitan park districts, city/county service area agreements (joint ventures) and self-help agreements with user organizations. The community planning efforts currently underway serve as a mechanism to address community values and needs for local parks and recreation activities.

#### PIERCE COUNTY COMPREHENSIVE PARK, RECREATION, AND OPEN SPACE PLAN

The Pierce County Comprehensive Park, Recreation, and Open Space Plan (referred to as the Parks Plan) provides general direction and guidance for both facilities and programs. The Parks Plan does not contain site specific plans for each of the County's properties. These site-specific plans have been prepared, modified, and implemented as needed over the decades. One example of a site specific plan is the development of a new Master Site Plan for Frontier Park.

### DESCRIPTION OF PARKS AND RECREATION IN THE PLAN AREA

The Graham community plan area contains only one Pierce County public park, the Frontier park site. There are water access and fishing opportunities provided by Washington State DNR on Lake Kapowsin and other lakes in the area. Also within the plan area is a proposed skate park partially funded by Pierce County second Real-Estate-Excise-Tax monies (2REET). The proposal is found in the Capital Facilities Plan for the County and includes the development of a skate-board/skate park somewhere in the Graham community area. The following was

reported as the current status of the project for the Parks November Capital Projects status report: “The attempts by the Graham Lions/Graham-Kapowsin Community Council/Bethel School District to work out issues regarding ownership, maintenance, liability insurance, etc. are still in progress. We are staying in contact with the stakeholders however; this project still appears to be, under the best of circumstances, a 2005/2006 project.”

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## FUNDING STRATEGIES FOR COMMUNITY AND NEIGHBORHOOD LEVEL PARKS

The County is a provider of regional parks and facilities. Local parks, also referred to as neighborhood and community parks, are no longer provided by the County. Existing local parks are currently maintained by the County and available for public use; however, the County is exploring the options for other public agencies to assume stewardship of local parks. At the community plan scale, there are three options available for expanding local parks.

One option would be to form a Park and Recreation District or Metropolitan Park District. State law RCW 36.69 provides the procedure and process for the creation of a Park and Recreation District and its administration. A Park and Recreation District is a special taxing district created by local residents by petition and election. A Park Board is created by election of its members and the Board may put issues such as bond requests on a ballot for consideration by the voters within the district. A Park District is a municipal corporation under State law and is, for the most part independent of the County Council.

Another option is found in RCW 36.68.400, Park and Recreation Service Area. This too is a special purpose taxing authority. This law states that a Park and Recreation Service Area is a quasi-municipal corporation and an independent taxing authority. The service area is created by vote of the people within the service boundary. The members of the County Council act as ex-officio and independently compose the body of the park and recreation service area.

The final option is to expand the current development regulation requirements for dedication of park land in order to create a system of small homeowner maintained “pocket parks.” While this option would provide additional park/open space areas for new developments it would not address the need for local parks to serve existing residents.

## OPEN SPACE

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### OVERVIEW OF CURRENT OPEN SPACE PLANS, POLICIES AND REGULATIONS

#### PIERCE COUNTY COUNTY-WIDE PLANNING POLICIES

All jurisdictions within Pierce County participate in the development of the Countywide Planning Policies (CWPPs.). Each jurisdiction’s comprehensive plan needs to be consistent with the policies established in the CWPPs. The Pierce County CWPPs require all jurisdictions to plan for the provision of open space; consider as open space parks, environmentally sensitive lands and greenbelts, natural buffers, scenic and natural amenities unique geological features; designate appropriate open space; and encourage new housing to locate in a compatible fashion with open space designations or outside designated open space.



## PIERCE COUNTY COMPREHENSIVE PLAN POLICIES

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The Pierce County Comprehensive Plan contains several policies that address open space. These policies establish some general criteria for areas that should be considered for open space. These criteria include areas where natural processes (e.g., wetlands and tidal actions) occur or sites that contain unusual landscape features (e.g., cliffs and bluffs), wooded areas, environmentally unique areas, and parcels which provide connectivity in the open space network.

The open space/greenbelt areas within the County are depicted in the map referenced in policy 19A.30.170 I. Section 19A.30.130, Objective 57A, states County programs which provide for preservation of open space shall have established priorities and these priorities will be used to rate open space proposals for Conservation Futures funding, Open Space Current Use Assessment taxation, Development Regulations bonus densities, and other County programs which acquire or preserve open space areas. Section 19A.30.130, Objective 59B, sets forth policies on the management and stewardship of County-owned open space lands. Finally, 19D.170 identifies the County's open space priorities grouped under high, medium, and low priorities.

## PIERCE COUNTY DEVELOPMENT REGULATIONS

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Title 18A, Development Regulations-Zoning, Section 18A.35.025 contains standards for minimum residential amenities which include provisions for on-site open space areas. These standards require the dedication of open space land per dwelling unit for subdivisions and mobile home parks. Section 18A.35.050 addresses open space issues such as density incentives, open space location and designation criteria, permitted uses, classification mechanisms, and public access. Permitted uses within designated open space areas include pervious and impervious surface trails, passive recreation and associated accessory structures, agricultural practices and associated structures, aquaculture, utility easements, and drainfields.

## OPEN SPACE PROGRAMS

Different open space programs and development regulations lend themselves to protection and restoration of various designated open space areas. For example, when designated open space areas fall within the jurisdiction of the State's Shoreline Management Act, the County's Shoreline Management Use Regulations are in effect. Likewise, when an open space area is located within a designated critical area, which is often the case since the mapping was primarily based upon critical area data, the County's Critical Area Regulations would apply. Outright purchase and other acquisition efforts, such as obtaining conservation easements, can be applied through the County's Conservation Futures Program or local land trust efforts. Property owners may choose to leave portions of their properties in an undeveloped condition in return for a reduction in their property taxes under the Current Use Assessment (CUA) program. Pierce County Conservation District Stream Team efforts and those of other local environmental organizations work to enhance and restore degraded riparian areas. Finally, the County's zoning regulations require a dedication of open space for certain types of

development and certain zoning classifications may be established that require lower densities or intensity of use and the application of environmentally sensitive design standards.

#### CURRENT USE ASSESSMENT PROGRAM

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Since 1972, the County has offered a Current Use Assessment (CUA) program. This program provides property owners with a tax reduction incentive to maintain properties in productive agricultural land, timberland, or open space land condition. At the present time, there are approximately 413 properties enrolled under the open space category of the CUA program.

In the summer of 1999, the administrative procedures for the CUA program were revised and a public benefit rating system (PBRs) was adopted as a means of ranking applications for the CUA open space category. Properties are evaluated to determine what environmental features are present and points are given based upon open space priorities and bonus categories such as public access and property located within an urban area and within the designated open space corridor. The amount of tax reduction is based on a sliding scale of points with the most sensitive lands receiving the highest tax reductions.

#### CONSERVATION FUTURES PROGRAM

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The Parks Department also administers the Conservation Futures Program, which since 1991 has authorized the County to collect a real-estate property (6¼ cent per \$1,000.00 of assessed valuation) tax for the acquisition of open space properties or conservation easements. To date the County has collected \$26,900,000 and acquired 1,245 acres of valuable wildlife habitat and open space properties throughout the County. The properties are not only held by the County but also by the cities and land trusts within the County.

The County Parks Department, utilizing Conservation Futures Program monies, purchased the Muck Creek/Patterson Springs property for \$785,000 from the Tacoma Public Utilities in 2002. This is an 80-acre wildlife habitat site generally located near 252nd St. E. and 86th Ave. E. and adjacent to the Morse Wildlife Preserve. This property was transferred over to the Cascade Land Conservancy for long-term stewardship.

## PIERCE COUNTY LIBRARY SYSTEM

#### LIBRARIES SERVING THE PLAN AREA

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The Pierce County Library System is the library provider for the Graham Community Plan area. The system operates one library Graham located at 9202 224th St. E. Additionally, the area is serviced by the Pierce County Bookmobile every first and third Thursday of the month. The Pierce County Bookmobile has four stops in the area: 194th St. E. and Meridian, Graham Elementary, Quiet Village at 255th St. E., and Tibbett's Landing at 244th St. E. People that live in the plan area also have the option to remotely connect to the Pierce County Library system by logging on to the library catalog system from their home computer.

## POLICIES/PLANS IN DEVELOPMENT

The library system is focused on the development of the Kids Bookmobile program and is working with the Bethel School District to add more sites in the Graham area to better serve the needs of children.

The Pierce County Library System is currently in the process of reviewing the levies for Pierce County. The library staff is conducting a study to determine if they should remove the 1% levy and replace it with a \$.50 per \$1,000 of assessed value levy. This would be the statutory limit for library revenue collection. The staff is also aware of the need to conduct a Capital Facilities review; however, no decision on when that review would take place has been determined as of today. The system has two main concerns:

- The Graham Library is one of the most vandalized sites in the system; mainly the shooting out of lights after hours. The staff is concerned because these actions increase the operating cost of the library.
- The speed limit on 224th St. E. is a concern of the library because of the high rate of vehicles speeding.

## POWER – ELECTRIC AND NATURAL GAS

The Graham Community Plan is served by three power and electricity utilities:

- Tacoma Power and Light serves the northwest portion of the plan area covering approximately 13,721 acres. The utility boundaries are generally from 194th St. E. to 257th St. E. between Mountain Highway and Meridian Avenue. Tacoma Power is a public owned company that was created in 1893 to serve the needs of the greater Tacoma area.
- Ohop Mutual provides energy to the southwest portion of the plan area covering approximately 10,354 acres. The utility boundaries are generally from 257th St. E. to 352nd St. E. between Mountain Highway and Meridian Avenue.
- Puget Sound Energy serves the entire east portion of the plan area covering approximately 24,875 acres. The utility boundaries are generally from 194th St. E. to 352nd St. E. between Meridian and Orville Road. There are electric system improvement projects under review in the Graham area. PSE's 10-year plan includes the following:
  - Build a new substation in the vicinity of the Orting-Kapowsin Hwy and 224th St E
  - Build a new substation in the vicinity of 195th Ave E and 264th St E
  - Build a new substation in the vicinity of SR 161 and 200th St E
  - Install new 115 kV facilities along 304th St E/Kapowsin Hwy between SR 7 and Orville Rd E
  - Install new 115 kV facilities between the vicinity of SR 161 and 176th St E and the vicinity of Orville Rd and Kapowsin Hwy
  - Install new 115 kV facilities between the south end of the City of Orting and the vicinity of Orville Rd and Kapowsin Hwy

- Puget Sound Energy is the natural gas provider for the Graham area. There are gas system improvement projects under review in the Graham area. PSE's 10-year plan includes the following:
  - Install a new district regulator in the vicinity of the SR 161 and 224th St
  - Install a new district regulator in the vicinity of the Orting Kapowsin Hwy and 224th St E
  - Install new High Pressure gas facilities in 224th St E between 22nd Ave E and the Orting-Kapowsin Hwy

## STORMWATER FACILITIES

### OVERVIEW OF CURRENT STORMWATER DOCUMENTS, POLICIES AND REGULATIONS

There are several documents that address stormwater management in the Graham planning area, including the Pierce County Comprehensive Plan, individual basin plans, and non-point pollution watershed plans. The County's stormwater actions are governed by the National Pollution Discharge Elimination System Permit (NPDES) issued to Pierce County by the Washington Department of Ecology (WDOE). The County's adopted stormwater management regulations are required to be consistent with the requirements outlined in the WDOE Stormwater Management Manual for Western Washington.

### STORM DRAINAGE AND SURFACE WATER MANAGEMENT PLAN

The Pierce County Storm Drainage and Surface Water Management Plan (1991 Plan) was adopted in 1991 and is part of the Pierce County Comprehensive Plan. The 1991 Plan established a system for managing stormwater within individual drainage basins.

The stormwater management program is administered by the Water Programs Division of Public Works and Utilities (Water Programs). Water Programs is home to the County Storm Drainage and Surface Water Management Utility (SWM). SWM develops annual and 6-year capital improvement programs containing a list of surface water management projects utilizing the 1991 Plan and supplemental information.

The program is supported by stormwater management fees collected within each basin. The current fee structure is based upon the need for storm and surface water management activity within each basin.

### BASIN PLANS

In recent years Water Programs has begun updating the 1991 Plan by preparing plans for the individual drainage basins. The Graham Community Plan area is within five of those drainage basins: Clover Creek, Muck Creek, Nisqually, Mid-Puyallup and Upper Puyallup. Water Programs is developing storm drainage and surface water management plans that are specific to each of those basins. The Clover Creek, Muck Creek, and Mid-Puyallup plans have been completed and adopted by the Pierce County Council. The Nisqually and Upper Puyallup Plans

will be completed within the next three years. They are in the preliminary stage of development.

The plans contain information used to determine future capital improvement expenditures for projects and programs within each basin. Those expenditures are included within the County Capital Improvement Plan that is reviewed on an annual basis by the Pierce County Council.

The proposed projects and programs were developed after a comprehensive review of existing surface water related issues within each basin. They are intended to address flooding, water quality and riparian habitat problems within the basins. Proposed projects and programs include such solutions as construction of stormwater facilities, restoration of floodplain and riparian areas, acquisition of floodplain areas, studies to determine solutions to specific problems, and Countywide programs such as improved public education and outreach activities and development of a comprehensive monitoring program.

#### NONPOINT POLLUTION PLANS

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Pierce County has prepared the Chambers-Clover Creek Watershed Action Plan and the Lower Puyallup Watershed Action Plan and the Upper Puyallup Watershed Action Plan through a concurrency process with multiple stakeholders, including the public. These are documents that contain several recommendations for reduction of sources for non-point source pollution within the basins and are implemented by multiple stakeholders. Implementation of the plans is overseen by individual Watershed Councils representing the two WRIs (Water Resource Inventory Areas), the Chambers-Clover Creek WRIA and the Puyallup WRIA.

#### NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND STORMWATER REGULATIONS

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In July 1995, Pierce County was issued a National Pollutant Discharge Elimination System (NPDES) permit from the Washington State Department of Ecology. This permit regulates both the quality and quantity of stormwater in new development as well as existing structures. This permit, rooted in the federal Clean Water Act, is a major factor in the County's stormwater and surface water management program.

To implement the NPDES permit, Pierce County has adopted the following local regulations and guidance documents:

- Stormwater Management & Site Development Manual – Provides guidance on reducing stormwater flows and erosion from new construction.
- Best Management Practices Manual – Provides guidance on ways in which existing businesses and residences can reduce or prevent pollution.
- Illicit Discharge Ordinance – Makes it illegal for any business or individual to cause Pierce County to violate its permit. It includes an inspection program.

Stormwater improvement projects are subject to review by numerous agencies. Permits and reviews that may be required include hydraulic project approvals from Washington State Department of Fish and Wildlife, Water Quality Certification from Washington State Department of Ecology, Stormwater Permit from Washington State Department of Ecology, Corps of Engineers review for Nationwide or Individual Permits under the Clean Water Act,



Endangered Species Review, County Wetland and Critical Review, State Environmental Policy Act review, Shoreline Permit Review and Department of Natural Resources review for discharges to state-owned lands.

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#### LEVEL OF SERVICE STANDARDS FOR STORMWATER FACILITIES

Surface Water Management levels of service (LOS) are established in the Pierce County Capital Facilities Plan (CFP). In general, sizing of all major ponds and conveyance systems is for the 100-year storm, given future build-out based on current zoning. Ponds are sized using both 24-hour events and 7-day events, whichever is larger. All infiltration facilities have water quality features to protect groundwater quality. Detention ponds usually include designed water quality features, typically to reduce maintenance costs or to protect in-pond wetland features.

The County must frequently correct problems within developed areas that have occurred because existing systems are inadequate to handle surface water flows. In these instances, the County is not always able to fully achieve the prescribed level of service with its new facilities because sufficient land is not available, or because reconstruction of an entire system is not cost efficient. In these cases the projects that are developed are designed and constructed in a manner that best meets the needs of the area. Sometimes multiple solutions must be utilized, such as both the construction of stormwater facilities and purchases of flood prone properties within an area. The Comprehensive Plan favors the use of nonstructural methods for surface water management (i.e., protection of water resources from development impacts instead of constructing facilities such as pipelines and ponds).

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#### EXISTING STORMWATER MANAGEMENT STRUCTURES AND FACILITIES WITHIN THE PLAN AREA

County GIS mapping shows that the Water Programs Division of Public Work and Utilities owns and maintains 15 stormwater facilities within the plan area. According to a review of public and private facilities using Pierce County GIS data, there are approximately 100 miles of drain pipe (36 miles of public pipe), approximately 2000 catch basins (1000 public catch basins), approximately 470 dry wells (270 public), and 236 miles of ditches (160 public) within the plan area. Catch basins, pipes, and dry wells are concentrated in the northern area where there is more development. The County is responsible for maintenance of facilities within County right-of-way.

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#### STORMWATER AND SURFACE WATER MANAGEMENT ACTIVITIES PROPOSED WITHIN THE PLAN AREA

During development of the proposed Clover Creek, Mid-Puyallup, and Muck Creek Basin Plans stormwater and surface water management issues were identified and evaluated within the Graham area. Water Programs staff and consultants reviewed documented surface water data and storm drainage concerns, solicited citizen input and conducted field evaluations to identify problems and potential projects. In several cases projects were revised or added as the result of citizen concerns. The same processes will be used to identify issues within the Upper Puyallup and Nisqually Basin Plan areas.

## MID-PUYALLUP BASIN

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The northeast corner of the Graham plan area lies in the Horsehaven Creek drainage area of the Mid-Puyallup Basin. Sediment-laden stormwater from new construction and from the erosive force of peak stormwater volumes during storms has severely damaged Horsehaven Creek. Stormwater is undermining Jansky Road and the Mid-Puyallup Basin Plan recommends a channel stabilization project. Streamside residents and County staff report deep sediment deposits in the Puyallup River valley. Restoration and conservation of the riparian corridor in the valley and the replacement of two culverts that are barriers to fish passage have been identified as needs in the area.

## CLOVER CREEK BASIN

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The northwestern portion of the plan area lies within the Spanaway Creek and Upper Clover Creek sub-basins of the Clover Creek Basin. Groundwater flooding is a problem near the northern boundary of the plan area. Recommended solutions to the problem include acquisition of impacted properties, re-evaluation of existing stormwater conveyance systems, construction of infiltration facilities downstream of the problem area, blocking culverts, and flood-proofing residences.

## MUCK CREEK BASIN

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Most of the community plan area lies within the Muck Creek Basin. Some flooding problems have been identified throughout the Basin. Most involve localized ponding due to topographic depressions or undersized culverts and ditches. Many involve maintenance of existing facilities to remove blockages. Flooding is generally problematic only during larger storm events. The rural densities throughout most of the planning area and regulatory constraints against development within floodplains and within wetland buffers aid in the mitigation of flooding impacts.

There has been a flooding problem around 224th St. E. and Meridian caused by runoff from roads and development. The soils in that location are such that stormwater could be infiltrated. In 2004, Water Programs initiated a groundwater monitoring study to determine the connectivity of groundwater in this area to that within the Clover Creek Basin. The results of that study will influence the type and/or location of a County solution to the problem. The study is anticipated to be completed in 2006.

In addition to construction of stormwater facilities in the plan area, Water Programs has proposed the acquisition of riparian areas that are sensitive to surface water impacts. The properties have been identified on the basis of the presence of floodplains, wetlands, and stream corridors. Protection, and if necessary, restoration of these properties would ensure that floodplain capacity is not compromised, that erosion and sedimentation would not contribute to downstream interruption of stream flow or water quality. The Patterson Springs area is of particular interest, because the headwaters of the North Fork of Muck Creek originate there. The springs appear to be the source of year-round flow in the North Fork. The South Fork of Muck Creek tends to be dry much of the year. Protection of adjoining flood plains and wetlands along areas of the South Fork could ensure that ground and surface water are

naturally held and released at a rate that reduces the potential for flash flooding and associated erosion and sedimentation along the creek during large storm events.

## SOLID WASTE AND RECYCLING

### OVERVIEW OF CURRENT SOLID WASTE AND RECYCLING PLANS, POLICIES AND REGULATIONS

#### COMPREHENSIVE PLANS

The County updated the Tacoma-Pierce County Solid Waste Management Plan in 2000. It was adopted by the cities and towns and approved by the Washington Department of Ecology in 2001. The Pierce County Solid Waste Advisory Committee (SWAC) participated in the development of all policies and activities for the recycling, waste reduction, and illegal dumping programs, and continues to meet regularly to review programs and gather citizen input. All meetings are advertised and are open to the public.

#### SOLID WASTE PLAN POLICIES AND GUIDELINES

The Year 2000 Solid Waste Plan carried forward many of the goals, policies and program priorities first established in 1989. For the most part, the many new recommendations are about enhancing and expanding those recycling programs that have been successful and redirecting efforts to incorporate new solutions. They also look at ways to continue and improve services that support the long-term cooperative system developed between the County, cities and towns, and the private haulers and recyclers.

The main new recycling policy directed the County to review the residential curbside program to explore ways to add other recyclables and revise the bin system to keep participation rates high. After a public review, the County adopted new minimum levels of service for curbside recycling (Pierce County Code, Chapter 8.29) which directed the haulers to collect commingled recyclables in a single, wheeled 96-gallon cart and to offer the same program to their contract cities and towns. Other recycling policy directions include: expanding the public outreach and educational programs; developing new outreach programs for businesses and self-haulers; providing adequate funding to support the programs; and increasing diversion and recycling of foodwaste and compostable organics.

There were no major changes to disposal policies. They continue to provide for both in-county and out-of-county disposal options and direct disposal companies to reserve in-county Municipal Solid Waste (MSW) disposal capacity for Pierce County waste, to the extent allowed by law. The County contracts for disposal and operation of the County's transfer stations with Pierce County Recycling, Composting & Disposal LLC doing business as (dba) LRI.

One new policy directs the County to investigate patterns of usage, future needs, and ownership options for the County-owned facilities, such as the transfer stations and the yardwaste composting facility. This study is scheduled to complete its first phases in 2006.

New plan policies significantly expanded the direction to all agencies to identify illegal dumping and junk vehicle problems; to remove legal barriers; to develop coordinated prevention and

enforcement programs; and to find ways to finance cleanup efforts. These policies resulted in the Solid Waste Division's development of the Pierce County Responds Program in 2002 and the adoption in 2003 of Chapter 8.10 of the Pierce County Code to resolve public nuisance vehicle problems.

## SOLID WASTE AND RECYCLING SERVICES AND FACILITIES IN THE PLAN AREA

### COLLECTION SERVICES

Curbside pickup of garbage and recyclables is available to all households and businesses within the plan area. Service is provided by two solid waste collection companies under the franchise authority of the Washington Utilities and Transportation Commission (WUTC). Pierce County Refuse, a subsidiary of Harold LeMay Enterprises, serves all areas west of Meridian (SR 161) and all areas south of 304th St. E. Murrey's Disposal, a subsidiary of Waste Connections, Inc., serves all areas east of Meridian and south to 304th St. E.

Both companies offer a variety of levels of garbage service for single-family and multifamily households, condominiums, mobile home parks, and commercial/industrial businesses. Yardwaste collection is also available to most developed residential neighborhoods.

For recycling collection, residential households are provided with a 96-gallon recycling cart to recycle newspaper, cardboard, mixed-waste paper, magazines; plastic pop, milk, and water bottles; paper milk cartons; and all tin, steel, or aluminum cans. The hauling companies sponsor a number of drop-off collection sites for glass and also offer recycling collection services to commercial businesses.

### FACILITIES AND SELF-HAUL OPPORTUNITIES

Only route collection and commercial waste vehicles are allowed to take waste to the LRI Landfill located at 304th St. E. and Meridian within the Graham area. It is a privately-owned landfill operated by Pierce County Recycling, Composting & Disposal, LLC dba LRI. The County contracts with LRI for disposal of municipal solid waste.

Residents can self-haul their garbage, yardwaste, or recyclables to the Hidden Valley Transfer Station, located just north of Graham at 176th St. E. and Meridian at the site of the closed Hidden Valley Landfill. Recycling drop-off is free but there is a fee for garbage and yardwaste. Yardwaste is accepted at a reduced rate and is composted and turned into a valuable soil amendment or mulch at the LRI Compost Factory located at Hidden Valley.

Questions about where to take other items for disposal or recycling can be directed to the Pierce County Public Works and Utilities Department, Solid Waste Division. The Division maintains a current list of the many private and public facilities handling waste and recyclables and provides a full range of public outreach, school education programs, and publications about waste and recycling or composting. The Division sometimes sponsors special collection events for hard-to-recycle items. The latest information can be found at: [www.piercecountywa.org/recycle](http://www.piercecountywa.org/recycle).

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## HOUSEHOLD HAZARDOUS WASTE

Used motor oil and anti-freeze can also be taken to the Hidden Valley Transfer Station. All other household hazardous wastes, such as oil-based paints, pesticides, herbicides, solvents, or cleaners can be taken free-of-charge to the City of Tacoma's Household Hazardous Waste Facility located at the Tacoma Landfill. The Tacoma-Pierce County Health Department maintains a Hazardous Waste Hotline to answer questions about proper disposal of hazardous waste and works with an assortment of gas stations and auto-parts stores to sponsor drop-off sites for used motor oil.

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## ILLEGAL DUMPING & JUNK VEHICLES

Pierce County Responds is the County's program to provide a comprehensive response to the problem of illegal dumping of waste and nuisance vehicles. The Solid Waste Division maintains a hotline to receive and investigate illegal dumping and nuisance vehicle complaints. Within the authority of this program, the County offers a cooperative abatement system to assist with cleanup of waste and vehicle removal, recommends cases for prosecution, effects site cleanups, and promotes citizen involvement in litter cleanup activities. The program brings together the staff and resources from the departments of Public Works and Utilities, Planning and Land Services, Community Services, Sheriff, Prosecuting Attorney and the Tacoma-Pierce County Health Department. Information about the program can be found at: [www.piercecountyresponds.org](http://www.piercecountyresponds.org).

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## LEVEL OF SERVICE STANDARDS

Solely for the purposes of projecting long-term disposal needs, the County uses a Level of Service (LOS) standard of 4.5 lbs per capita per day for disposal and 4.5 lbs per capita per day for recycling (50% recycling rate). The County is required to plan for 20 years of disposal capacity and contracts for disposal of municipal solid waste at the LRI Landfill. The contract also allows for long-haul of waste out-of-county.

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## PROPOSED SOLID WASTE AND RECYCLING SERVICE AND FACILITIES FOR THE PLAN AREA

In 2005, a full-service, year-around household hazardous waste collection facility was built at the Hidden Valley Transfer Station at 176th St. E. and Meridian (SR 161). Residents will be able to drop-off all household hazardous wastes free-of-charge. Hazardous waste from commercial or industrial businesses must be taken to permitted private facilities.

## DESCRIPTION OF DESIRED CONDITIONS

### DOMESTIC WATER

Ensuring adequate and good quality groundwater supplies to provide healthy drinking water is a very high priority to the community. Conservation efforts should be made to ensure that water purveyors do not run low or dry in summer months. If necessary, new interties should be established to provide adequate water supplies and Pierce County should proceed with



becoming a wholesale water supplier to existing Class A water purveyors. Class A water purveyors should also work with Class B systems or individuals to acquire currently underutilized water. As new development proposals are submitted Letters of Water Availability should be required that demonstrate which water right is being used and how much water is available in order to track cumulative impacts to the groundwater source.

## TRANSPORTATION

The Transportation Section provides a foundation for the improvement of transportation facilities in the plan area. The policies, along with the prioritized project recommendations, provide guidance on the type and location of improvements that should be pursued over the next twenty years.

A number of themes are contained in the plan policies and project recommendations. The transportation system within the plan area should be designed to accommodate increased commuter traffic volumes as well as recreational/tourist related trips while still exhibiting a rural character. Roadways should include shoulders or sidewalks that allow for safe pedestrian and bicycle movement or alternatively, nonmotorized trail systems should be provided. These systems should connect residential areas with commercial nodes. When possible, streets should be oriented in such a manner as to take advantage of scenic views and vistas. A program should be undertaken to improve traffic flow, safety, and access. Future roadways should be sited to maintain existing neighborhoods, protect vital environmental features, and facilitate emergency vehicle access.

Transit routes should be added and frequency increased as the population increases. Bus stops and shelters should be integrated into the streetscape, especially in the more urban portions of the plan area. Development of the "Train to the Mountain" should occur and the opportunity for a train stop within the Graham Rural Activity Center (RAC) at 224th St. E. and Meridian should be examined.

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### PRIORITIZATION OF TRANSPORTATION PROJECTS

Future transportation improvements should be completed based upon a prioritization of projects considering existing safety issues, community needs and desires, and costs. Most of these improvements were previously identified in the Pierce County Comprehensive Plan; however, several new projects have been listed to address community concerns. The most notable additions to the project recommendations may be those within the Graham RAC. A set of north-south and east-west roads is proposed within the Graham RAC that would allow vehicles to circulate around the commercial area without having to use SR 161 and 224th St. E. A few of the Comprehensive Plan projects were removed or modified, as well. See Appendix A for Prioritized Transportation Project Recommendations and two maps titled "Transportation Project Recommendations" for the description and location of the recommendations. The two maps portray identical information, but one includes the whole plan area and the other is a close-up of the Rural Activity Center vicinity. The CPB prioritized each project into one of four priority categories of relative importance: Premier, High, Medium, and Low. This prioritization scheme was originally developed for the 1992 Transportation Plan and has been used in all

community plans. The rating of each project is one of the items used to guide the programming and construction of roadway improvements.

## LAW ENFORCEMENT AND FIRE PROTECTION

Law enforcement and fire protection services are necessary in rural areas as well as urban areas. Service personnel and facilities should be available to meet the needs of the population and established national response time standards. And these services should be proportionally increased in pace with population increases. Law enforcement agencies should consider co-locating police precincts with fire stations or other public facilities such as libraries.

## PUBLIC SCHOOLS

Pierce County collects impact fees to help mitigate the impacts of new development on the school district personnel and facilities. These impact fees should be significantly increased to help offset the actual cost of increased service.

## PARKS AND RECREATION

### REGIONAL PARKS

New regional parks should be located near physical amenities such as lakes, creeks, wetland, forested areas, and historical and scenic areas and when possible, provide access to shorelines. These parks should be at least 40 acres in size and provide a range of both passive and active recreation activities. Some priority areas for future park acquisition include Lake Kapowsin, Whitman Lake boat ramp, and Lake Tanwax boat ramp.

The citizens of the plan area should have an opportunity for community involvement in the siting and developing of regional parks and the Pierce County Parks and Recreation Services Department should provide adequate notice of any such upcoming opportunities. Each regional park should have a development site plan that identifies passive and/or active recreation areas, buildings or other structures, open spaces, and intended uses. These park facilities may charge user fees to generate funds for ongoing maintenance and operation of the facility.

### NEIGHBORHOOD AND COMMUNITY PARKS

A local Park Service Area, Park District, or Metropolitan Park District should be created to help fund and develop neighborhood and community parks. Local citizens and organizations should work together with the Pierce County Parks and Recreation Services Department to determine the feasibility of creating and financing a local park service area or district. If this is favorable to the larger community, then Pierce County Parks and Recreation Services Department should assist the community in bringing this issue to a future general election for a vote by the affected citizens. The Parks and Recreation Services Department should also help the Park Service Area,

Park District, or Metropolitan Park District with preparing grants for property acquisition, operation and maintenance for neighborhood and community parks.

Pierce County should assist the Park Service Area, Park District, or Metropolitan Park District in requiring an impact fee, land dedication or fee-in-lieu-of dedication for neighborhood and community parks. All new residential subdivisions and multifamily residential developments should be required to contribute towards the acquisition and development of neighborhood and community parks in accordance with standards outlined in the community plan. If a Park Service Area or Park District is created, then County collected park impact fees should be transferred to that entity to be used for the acquisition and development of community and neighborhood parks. In addition, Pierce County shall develop regulations that identify the location, use, improvement and maintenance of land dedicated for community and neighborhood parks.

New neighborhood and community parks should be located and designed to serve the needs of all segments of the community and provide for both passive and active recreational areas. Community parks should typically be between 15 to 25 acres in size, accessed from an arterial road and provide restroom facilities. Neighborhood parks should generally be 5 to 10 acres in size but may be smaller when located within private residential developments. These smaller scale parks should be evenly dispersed throughout the plan area and easily accessed by walking or bicycling from residential areas. Whenever feasible, neighborhood parks should be developed adjacent to school sites to promote facility sharing and provide amenities lacking at school grounds such as trails, open space, picnic areas, and playground equipment.

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#### PARTNERSHIPS

Pierce County, school districts and any created Park Service Area or Park District should work cooperatively to provide and improve park and recreational facilities and programming within the plan area. These types of partnerships could include program coordination and cost-sharing for construction, improvement and maintenance of joint-use facilities. One example of this concept is co-locating community recreational activities within schools.

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#### PARK SITE ACQUISITION

Vacant land should be acquired now for future development of parks. Some of these acquisitions should also serve to expand existing parks. Several areas have been identified as high priority for acquisition including Lincoln Tree Farm, areas along Muck and South Creeks, places on the Puyallup River, Pierce County Elk Plain Road Shop property, north end of Kapowsin Lake, and expansion of Morse Preserve, Cougar Mountain Park, and Frontier Park. A complete listing of all identified areas is located in the plan policies. These priorities should be balanced with the need to expend revenue to develop existing vacant or underdeveloped park properties and the acquisition of other properties, not on the list, that become available as a good opportunity and/or cost. (See Map F-40: Park, Recreation, and Trail Facilities (Proposed and Existing))

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## TRAILS

A community-wide system of trails should be developed that link schools, neighborhoods, unique environmental features and other points of interest. The trail systems should be multi-modal and provide for walking, bicycling, and horseback riding. The trails within the plan area should connect to other regional trail systems (identified by Pierce County or the Forever Green Council) within the County or when possible with trails identified in other community plans. These trails should also be located and designed to enhance user safety, avoid or mitigate environmental impacts and be aesthetically pleasing for the user. High priority areas for new trails include around Lake Kapowsin and within Frontier Park and other parks. Developers should be required to dedicate regional trails during the subdivision and site development processes. And unopened rights-of-way and other public lands should be considered for trail systems. When possible, trail acquisition and development should be coordinated with the Pierce County Transportation Plan.

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## EXISTING PARKS AND RECREATION PROGRAMS

Existing parks and recreation facilities and programs should be maintained and renovated in accordance with the master park plan process. These improvements should serve to enhance programs and facilities within the plan area.

## PIERCE COUNTY LIBRARY SYSTEM

Safety and security should be improved around the Graham Library. A study should be conducted to determine the feasibility of lowering the speed limit to 35 miles per hour or implementing other means to reduce speeds on 224th St. E. between 82nd Ave. and Meridian. Pierce County should consider co-locating a police substation at the library property to help reduce vandalism.

## STORMWATER FACILITIES

Stormwater facilities serving the plan area should be functional, environmentally sound, and as aesthetically pleasing as practicable. These facilities should be designed to mitigate existing stormwater problems and to blend in with and mimic natural systems, such as wetlands. When possible, stormwater facilities should provide passive recreational opportunities and aquifer recharge functions. The County Council should adopt the watershed basin plans which identify necessary stormwater management and flood control improvements.

## SOLID WASTE

Solid waste facilities are a necessary component of modern life. However, inappropriate siting or development of these facilities may cause environmental impacts to groundwater supplies, which may also result in problems to the public's health. As such, new or expansions of existing solid waste facilities should be located and developed in a manner that protects the natural environment and the surrounding population. At a minimum, federal, state, and local criteria

shall be adhered to. In addition, solid waste facilities should not be located closer than five miles to any Shoreline of the State nor within one mile of any tributary to such waters or within a designated floodplain. Development of facilities shall not involve the filling of any wetlands, unless no other practicable alternative exists and then only with adequate mitigation conducted within the watershed resource inventory area. These facilities should not be located over a sole source aquifer, as defined by the federal or state government or in areas that have a high preponderance of outwash materials (such as sand and gravel) that have high infiltration capacity. Any proposed sites for a solid waste facility should be evaluated through independent studies to determine geologic and hydrogeologic conditions.

Local approval of solid waste facilities should contain requirements for ongoing monitoring and corrective actions for any contamination or other problems that may occur. A rigorous monitoring regime should be established to evaluate the status and quality of the underground water tables, water pressure, and ground fractures. A remediation plan should detail measures to be initiated if groundwater contained within the aquifer or surface water is contaminated.

The Tacoma-Pierce County Health Department should provide information to the public on the status of existing solid waste facilities within the plan area. An annual written report detailing the monitoring and testing results should be provided to the water purveyors and landowners within a ten-mile radius of the facility and posted on the internet and in all local newspapers for general public access.

## CAPITAL FACILITIES POLICIES

### LAW ENFORCEMENT AND FIRE PROTECTION

- GOAL GR CF-1** Provide adequate law enforcement and fire protection services and response times within the plan area.
  - GR CF-1.1** Reduce law enforcement response times and increase police presence by locating a new police precinct in the plan area.
  - GR CF-1.2** Consider co-locating a precinct with fire stations and the Graham Library property.
  - GR CF-1.3** Consider the 304th St. E. and Meridian Rural Activity Center as a potential location for a new precinct.
  - GR CF-1.4** Encourage Fire Districts to pursue impact fees to help defray the costs associated with serving new development.

### LIBRARY SYSTEM

- GOAL GR CF-2** Improve safety and security around the Graham Library.
  - GR CF-2.1** Consider reducing the speed limit on 224th St. E. from 82nd Ave. to Meridian to 35 mph.



**GR CF-2.2** Pierce County should initiate an engineering study to determine the feasibility of reducing the speed limit to 35 miles per hour or implementing other means to slow traffic.

**GR CF-2.3** Co-locate a police substation at the library property to help reduce vandalism.

## PARKS AND RECREATION POLICIES

### GOALS

Provide regional, community, and neighborhood parks and recreational facilities to meet the needs of the existing and future population to serve the County and plan area.

### REGIONAL PARKS

**GOAL GR PR-1** Achieve and sustain an acceptable level of service for regional park facilities.

**GR PR-1.1** New regional parks within the Graham Community Plan area should be designed and located to serve the needs of community residents as well as providing countywide benefits. New regional parks should meet the following criteria:

**GR PR-1.1.1** Park sites should be located to take advantage of the physical amenities in the plan area with attention to access points to waterbodies and watercourses. Priorities include lakes, creeks, wetlands, forested areas, steep slopes, and historical and scenic areas.

**GR PR-1.1.2** Regional parks should generally be 40 acres or more in size; however, these parks may be developed on smaller parcels based upon land availability, facility type, community need, site characteristics, and other factors. All sites that provide public access to waterbodies and watercourses in the Graham Community Plan area are regional sites.

**GR PR-1.2** The following are high priority sites for regional park land acquisition within the Graham Community Plan area. The sites are not listed in any order of preference or importance.

**GR PR-1.2.1** Lake Kapowsin;

**GR PR-1.2.2** Whitman Lake boat ramp;

**GR PR-1.2.3** Lake Tanwax boat ramp; and

**GR PR-1.2.4** Other properties as identified on the proposed parks and trails map for Graham.

**GR PR-1.3** The Council District 1 and 3 representatives on the Pierce County Parks Citizens Advisory Board should be provided with all necessary information to help inform civic and community groups and local governmental agencies about the plans and operations of the County regarding regional park location and development.

- GR PR-1.4** The Pierce County Parks and Recreation Department should actively encourage joint development among civic and community groups and local governmental agencies of regional park sites that include a local park component.
- GR PR-1.5** Development of facilities at a regional park should not occur prior to completion of the necessary site plan.
- GR PR-1.6** Where appropriate, develop park facilities that generate funds and incorporate revenue collection into the design.
- GR PR-1.7** When considering charging user fees at sites that provide recreational opportunities, establish an appropriate rate that will help support the maintenance and operation of these facilities.

## NEIGHBORHOOD AND COMMUNITY PARKS

- GOAL GR PR-2** Pierce County shall support the creation of a park service area, park district, or metropolitan park district to help fund and develop community and neighborhood-scale parks throughout the plan area.
  - GR PR-2.1** Identify local organizations interested in the improvement of park and recreational opportunities within the community and provide the initial technical and financial assistance necessary to form a park service area or district.
    - GR PR-2.1.1** The Pierce County Parks and Recreation Department should conduct a series of education workshops regarding the formation, financing, and management of park service areas and districts.
    - GR PR-2.1.2** The Pierce County Parks and Recreation Department should assist the community to identify sponsor(s) willing to lead in efforts to form the park service area or district.
    - GR PR-2.1.3** Upon generating sufficient public interest in the formation of a park service area or district, Pierce County shall bring the issue to a vote of the citizens at the following general election.
    - GR PR-2.1.4** Pierce County Parks and Recreation Department shall provide park and recreation providers technical expertise in site planning and facility needs assessments.
    - GR PR-2.1.5** Pierce County Parks and Recreation Department shall provide assistance in the preparation of grants for property acquisition, operation, and maintenance.
  - GR PR-2.2** Pierce County should require an impact fee, land dedication, or fee in lieu of dedication for community and neighborhood-scale parks based upon the standards of the Community Park Facilities Standards and Neighborhood Park Facilities Standards.

- GR PR-2.2.1 Pierce County should require all new residential subdivisions and multifamily residential developments to pay an impact fee, dedicate land, or pay a fee in lieu of land dedication for the development of community and neighborhood parks. The structure of each of these options shall be correlated to the standards set forth.
- GR PR-2.2.2 When a park service area or park district is created, it shall consider the collection of park impact fees as a means of providing funds for community and neighborhood parks.
- GR PR-2.2.3 Pierce County shall develop regulations controlling the location, use, and improvement of land dedicated for community and neighborhood park purposes. Such regulations shall prescribe minimum park dedication areas, access, amenities, location, and maintenance.
- GR PR-2.3 Land that is suitable for future neighborhood and community park and recreation facilities should be purchased or acquired by the park and recreation provider in the most effective method available. Park and recreation providers should implement innovative methods of financing land acquisition, facility development, and long-term maintenance and operating costs for all park and recreation facilities. Provide opportunities for community control of local parks.
- GR PR-2.3.1 All suitable County-owned properties that are being considered for divestment should first be evaluated as potential park sites.
- GR PR-2.4 Establish standards for community and neighborhood park and recreation facilities.
- GR PR-2.4.1 Utilize the following standards for community parks within the plan area:

**Table F-27: Graham Community Park Facilities Standards**

Facility	Unit
Community park land	3.5 acres per 1,000 population
Fields for softball and youth baseball for soccer, football, or pickup games	0.23 fields per 1,000 population
Multi-use outdoor paved courts (tennis, basketball)	0.4 courts per 1,000 population
Tennis court	0.3 courts per 1,000 population
Children's play area	0.35 play areas per 1,000 population
Picnic area	0.5 areas per 1,000 population
Trails or pathways (minor)	0.2 miles per 1,000 population
Restrooms	0.2 facilities per 1,000 population
Parking	0.23 spaces per 1,000 population

- GR PR-2.4.2 Utilize the following standards for neighborhood parks within the plan area:

**Table F-28: Graham Neighborhood Park Facilities Standards**

Facility	Unit
Neighborhood park land	3.0 acres per 1,000 population
Multi-use paved games court (1/2 court)	0.3 courts per 1,000 population
Children's play area	0.2 play areas per 1,000 population

**GR PR-2.5** New community and neighborhood parks within the plan area should be designed and located to serve the needs of all segments of the community.

**GR PR-2.5.1** New park sites should be located to take advantage of the physical amenities within the plan area. Priorities include wetlands, forested areas, steep slopes, historical areas, scenic areas, and other natural features.

**GR PR-2.5.2** The size of a community park is typically 15 to 25 acres. Access to a community park should be from an arterial street if traffic volumes are anticipated to be high, and parking shall be dependent upon the facilities provided. Restroom facilities should be provided at a community park.

**GR PR-2.5.3** Ideally, a neighborhood park should be 5 to 10 acres in size. However, these parks may be considerably smaller when located within a private development. Neighborhood parks should be separated from one another in a relatively even manner throughout the plan area. Typically, a one to two-mile separation is desirable. Neighborhood parks should be reasonably central to the neighborhood they are intended to serve. Access to a neighborhood park should be via a local residential street. Walking and bicycle access routes should avoid physical barriers such as major arterial roads or stream crossings whenever possible. Parking or restroom facilities are typically not provided at a neighborhood park.

**GR PR-2.5.4** Neighborhood parks should be developed adjacent to school sites whenever possible to promote facility sharing. Facilities at the neighborhood park site should supplement uses that the school does not provide such as trails, open space, picnic areas, playground equipment, and multi-purpose hard-surfaced courts.

**PARTNERSHIPS**

**GOAL GR PR-3** Pierce County Parks and Recreation Department and Pierce County Public Works and Utilities – Transportation Programming Division should coordinate transportation planning with the Frontier Park Master Site Plan process.

**PARK SITE ACQUISITION**

**GOAL GR PR-4** Acquire selected parcels of land for future development of park and recreational facilities.

- GR PR-4.1 Focus on park site acquisitions that serve to expand existing facilities.
- GR PR-4.2 Expand the Graham community passive and active recreation opportunities at Frontier Park to include walking trails and road-crossing striping.
- GR PR-4.3 Purchase additional land throughout the plan area for future development of park facilities. High priority areas for future park acquisition include:
  - GR PR-4.3.1 Lincoln Tree Farm east of Mountain Hwy., north of 288th St. E.;
  - GR PR-4.3.2 Other designated locations along Muck and South creeks;
  - GR PR-4.3.3 Puyallup River and other water bodies;
  - GR PR-4.3.4 Pierce County Elk Plain Road Shop property with dedicated trail to Bethel High School;
  - GR PR-4.3.5 A 25-acre undeveloped parcel located at 46th Ave. E. and 232nd St. E.;
  - GR PR-4.3.6 Cougar Mountain Park (could have prairie, passive/active recreation) on 26th St. E., east of 54th Ave. E.; also, K-12 school on 26th St. E. west of 54th Ave. E.;
  - GR PR-4.3.7 Possible community passive nature trail adjacent to the Morse Wildlife Preserve at 260th St. E. and 70th Ave. E.; also, expand the area included in the Morse Wildlife Preserve;
  - GR PR-4.3.8 Bonneville power line, in the trail system, extending across the plan area, from Mountain Hwy., and 288th St. E. to Orville Rd. south of Orting;
  - GR PR-4.3.9 Scenic overlook on Meridian at the top of Graham Hill;
  - GR PR-4.3.10 Possible expansion of Frontier Park on south side for trails;
  - GR PR-4.3.11 Puyallup River trail park; and
  - GR PR-4.3.12 A joint Pierce County/state park at the north end of Lake Kapowsin.

## TRAILS

- GOAL GR PR-5 Where appropriate, trails should link destinations, provide for all user groups, and serve a regional scale.
  - GR PR-5.1 The trail system should extend through the plan area and connect with the County's regional trail system in the Orting Valley. (See proposed park and trails map).
  - GR PR-5.2 The trail system should reflect the trail corridors included in the ForeverGreen Council's recommendations regarding regional and countywide trail connections spanning from the Cascade Mountains to Puget Sound.
  - GR PR-5.3 Trails should be designed to interconnect or form loops whenever possible.
    - GR PR-5.3.1 Trails should not dead end unless unique circumstances exist such as a trail that provides access to a specific destination.



- GR PR-5.3.2 When a proposed development is adjacent to vacant property, trails should be designed to accommodate future expansion at such time the adjacent property is developed.
- GR PR-5.4 Purchase additional land throughout the plan area for future development of trail facilities. High priority areas for future trail acquisition and development include:
  - GR PR-5.4.1 Around Lake Kapowsin;
  - GR PR-5.4.2 Trails within Frontier Park; and
  - GR PR-5.4.3 Trails within other parks.
- GR PR-5.5 Require the dedication of regional trails during the site development process.
  - GR PR-5.5.1 Designated trails should be considered for each subdivision and site plan approval.
  - GR PR-5.5.2 When a site is located along a proposed trail route, a linear section of land shall be dedicated and developed as a condition of approval. Such portion of land shall be credited toward any required park land dedication.
  - GR PR-5.5.3 When a site is not located along a proposed trail route, then a fee in lieu of land dedication shall be required to contribute toward the regional trail system.
- GR PR-5.6 Extend existing trail/sidewalk areas before starting on undeveloped areas (i.e., complete in segments).
- GR PR-5.7 Consider dedicating unopened rights-of-way and other public lands for trail purposes.
- GR PR-5.8 Require the installation of nonmotorized transportation trails that connect new developments to schools, parks, or adjacent developments.

## EXISTING PARKS AND RECREATION PROGRAMS

- GOAL GR PR-6 Maintain the existing park and recreation facilities and programs located within the plan area.
  - GR PR-6.1 Conduct maintenance and renovations to enhance existing regional park and recreation facilities and programs.
  - GR PR-6.2 Pierce County should continue the ownership and management of Frontier Park and should complete the Frontier Park Master Site Plan process.

## TRANSPORTATION POLICIES

### GOALS

Create transportation corridors and streetscapes that are visually attractive and functional for both vehicular and nonmotorized transportation.

### TRANSPORTATION CORRIDORS AND STREETSCAPES

- GOAL GR T-1** Create an interconnected, multimodal transportation system that provides amenities to its users and convenient access to nearby urban areas while retaining a rural character.
- GR T-1.1** Promote increased transit service and tourism-related transportation within the plan area.
    - GR T-1.1.1** Transit service should be a priority for community centers.
    - GR T-1.1.2** Consider a rail stop south of 224th St. E. as close as possible to the Graham Commercial Center.
  - GR T-1.2** Design roads and throughways to promote efficient movement of vehicles within the plan area while retaining the rural character.
    - GR T-1.2.1** Limit the number of traffic lights to maintain good traffic flow, particularly on Meridian Avenue.
    - GR T-1.2.2** Provide interconnectivity between subdivisions and commercial projects to the greatest extent possible
      - GR T-1.2.2.1** Developers of subdivisions shall provide roadway connections to all County roadways that abut their property, except where it is necessary to limit the number of access points along main roads or where shared accesses better facilitate traffic flow.
      - GR T-1.2.2.2** If access is provided to only one County roadway, then at least one stub road shall be built within the development to the property line of an abutting parcel to provide for potential future connection(s), unless environmental constraints preclude any such connection.
      - GR T-1.2.2.3** Priority shall be given to connecting to existing stub roads, existing platted rights-of-way, and/or future improvement projects as defined in County plans and programs.
    - GR T-1.2.3** The County shall, where feasible, provide pedestrian facilities when reconstructing or building new roadways. In urban areas, the improvement will consist of a sidewalk on at least one side of the roadway. In rural areas, a 6-foot width of crushed gravel will be provided on both shoulders of the roadway.

- GR T-1.2.3.1 Where adequate right-of-way exists in rural areas, a pedestrian pathway separated from the road by the drainage way or other buffer will be considered.
- GR T-1.2.4 Retain existing scenic country roads in a rural character.
- GR T-1.2.5 Locate infrastructure to increase connectivity between project phases and adjacent sites is accomplished during the land development process.
- GR T-1.2.6 Orient streets to take advantage of scenic views and vistas.
- GR T-1.3 Provide for efficient traffic flow and accommodate emergency vehicle operations by providing adequate parking in new subdivisions and school sites. New subdivisions are required to provide either on-street parking or shared off-street parking in urban areas and apply design standards for accommodating adequate off-street parking. A total of 3 parking spaces shall be provided in the urban area for each new single-family home. On-street parking shall be prohibited in rural areas. The following design techniques and standards should be applied:
  - GR T-1.3.1 Within urban residential developments, provide a minimum of 1 on-street parking space or off-street shared parking space per dwelling unit, dispersed in convenient locations throughout the development, for guest parking. The parking stalls should be located within 150 feet of the residences being served and may be clustered to serve multiple dwelling units.
  - GR T-1.3.2 Modify off-street parking for urban residential development to provide for at least 2 vehicles per dwelling unit. Garage areas shall not be included in the required off-street parking area (i.e., the garage area shall be in addition to the 2 required off-street parking spaces).
  - GR T-1.3.3 Driveways shall be at least 24 feet in length as measured from the face of the garage to the back of the sidewalk to prevent larger and longer vehicles from protruding into the traveled way.
  - GR T-1.3.4 Side yard setbacks (from the structure to the property line) shall be at least 5 feet on one side and at least 10 feet on the other side to allow vehicles to access the rear yard. This distance may be reduced only when alleys provide rear yard access.
  - GR T-1.3.5 Review and, if necessary, modify parking standards for school sites to provide adequate on-site parking for school events. Construct overflow parking areas of permeable materials such as grasscrete, permeable pavers, or pervious concrete.
  - GR T-1.3.6 Require minimum lot sizes and lot widths to better accommodate on-street and off-street parking. Allow lot width reductions only where adequate off-street shared parking is provided.

- GR T-1.3.7 In developments with private road systems, the homeowners' covenants shall require employment of a security or towing service to monitor at least twice daily and tow vehicles that are parked in the traveled way.
- GR T-1.3.8 Construct on-street parking and off-street shared parking areas of permeable materials in conformance with the most current Pierce County Stormwater Management and Site Development Manual
- GR T-1.3.9 On-street and off-street parking spaces shall be at least 22 feet in length. On-street parking space width shall be as outlined in the Pierce County road standards. Off-street shared parking spaces shall be at least 8 feet wide.
- GR T-1.4 Synchronize traffic signals where possible to provide for uninterrupted traffic flow.
- GR T-1.5 Require construction of pedestrian facilities by developers of residential, commercial, and industrial projects on all County roadways that abut their property.
  - GR T-1.5.1 Construct sidewalks in urban areas.
  - GR T-1.5.2 In rural areas, the improvement shall consist of a 6-foot width of crushed gravel on the roadway shoulder. Where right-of-way exists, construct a gravel pathway that is separated from the road by the drainage way or other buffer.
- GR T-1.6 Pursue innovative drainage design techniques to address flooding issues, such as those experienced along 224th St. E.
- GR T-1.7 Provide emergency warning signage at the intersection of 200th St. E. and Orting-Kapowsin Highway that directs traffic away from the Puyallup Valley in case of a natural disaster.
- GOAL GR T-2 Implement transportation improvements in the plan area in accordance with the project recommendations included in the Graham Community Plan.
  - GR T-2.1 Use the plan's project list and maps to guide programming and implementation of transportation projects.
  - GR T-2.2 Further refine the transportation concepts in the Graham Rural Activity Center and finance these transportation improvements with a combination of public and developer funds.
  - GR T-2.3 Pierce County shall work with the Washington State Department of Transportation to define consolidated east-west access roadways to serve new commercial sites within the Graham Rural Activity Center.

## UTILITIES POLICIES

### DOMESTIC WATER

- GOAL GR U-1** Provide adequate water supplies to meet the needs of existing residents as well as proposed new development.
- GR U-1.1** Ensure adequate domestic water to serve development and agricultural uses within the plan area.
  - GR U-1.2** Enhance water conservation by requiring plumbing fixtures that conserve water, instituting leak detection and correction programs, and by developing strict irrigation and landscaping standards.
  - GR U-1.3** Require landscaping that does not demand extensive irrigation for its survival, place an emphasis on the use of indigenous plant materials, and limit the extent of native vegetation removal.
  - GR U-1.4** Encourage existing Class A water systems to work with Class B water systems or individuals that may have underutilized water rights to acquire these systems to expand available capacity.
  - GR U-1.5** Protect groundwater supplies near the 304th Street landfill.
    - GR U-1.5.1** The Tacoma Pierce County Health Department (TPCHD) shall conduct a study to evaluate the current upward gradient pressure of the aquifer system underlying the 304th Street landfill and to determine how much additional water withdrawal may occur from the aquifer before posing a contamination risk to the groundwater supplies.
    - GR U-1.5.2** The TPCHD shall certify new wells within one mile of the 304th Street landfill to determine cumulative impacts to the underlying aquifer system.
    - GR U-1.5.3** The TPCHD shall restrict additional water withdrawals, except test wells, within one mile of the 304th Street landfill when the underlying aquifer water table height is lowered to the point where negative impacts to the landfill lining and groundwater supplies may occur.

### STORMWATER FACILITIES

- GOAL GR U-2** Develop stormwater facilities that are functional, environmentally sound, and aesthetically pleasing.
- GR U-2.1** Provide stormwater facilities within the plan area to mitigate existing stormwater problems and design these facilities to blend with and enhance natural systems.



## SOLID WASTE

- GOAL GR U-3** Protect the natural environment and public health and safety related to Municipal Solid Waste (MSW) landfill facilities.
- GR U-3.1** Establish standards for the siting of new or expansion of existing MSW landfill facilities to protect the public health, safety, and welfare and to address environmental impacts.
- GR U-3.1.1** The siting of any proposed MSW landfill or any proposed expansion of an existing MSW landfill shall follow applicable County, state, and federal statutes and regulations regarding criteria for appropriate site selection.
- GR U-3.1.2** The siting of any proposed MSW landfill or any proposed expansion of an existing MSW landfill in the plan area shall not be within 5 miles of any defined shorelines of the state or direct tributaries to a shoreline of the state, including Lake Kapowsin, Tanwax Lake, Whitman Lake, Morgan Lake, Ohop Creek, Kapowsin Creek, Puyallup River, Muck Creek and South Creek, or within 1 mile of any other river, stream, creek, or tributary within or adjacent to the plan area.
- GR U-3.1.3** No new MSW landfill shall be located over a sole source aquifer in the plan area given the strong potential to pollute future needed water supplies. In addition, no MSW landfill shall be permitted in certain locations with regard to pollution of water (surface and groundwater) in areas of the plan area that have a high preponderance of outwash materials (gravel, sand, or rock).
- GR U-3.1.3.1** No siting shall be approved and permitted for a site which has been fully examined independently and documented to contain a significant preponderance of one or more of the following U.S. Geological Survey defined soils: alluvium, peat, Electron mudflow, Osceola mudflow, Marshel formation, and/or Vashon Drift recessional outwash, advance gravel, or Steilacoom gravel.
- GR U-3.1.3.2** The County shall require independent review of site studies of the characteristics of any proposed site to reduce any potential compromising of the parameters, methods, and conclusions of the geologic studies which predict the rate at which contaminants move through underlying strata.
- GR U-3.1.3.3** The depth of the water table and levels of aquifers shall be considered primary health concerns by County officials and the Hearing Examiner in any review of a proposed MSW landfill application or an application to expand an existing MSW landfill.
- GR U-3.1.3.4** The County and TPCHD shall require a rigorous monitoring regime as landfills can create deliberate fractures, underground water tables, as well as significantly increase fluid pressure.

- GR U-3.1.4** The siting of any proposed MSW landfill or any proposed expansion of an existing MSW landfill in the plan area shall not permit the filling of any wetlands unless it is clear that no other practicable alternative exists. Any compensatory wetlands to mitigate for impacts associated with the construction of a MSW landfill shall be located in the same Water Resource Inventory Area (WRIA).
- GR U-3.1.5** The perimeter buffer around any new proposed MSW landfill or any proposed expansion of an existing MSW landfill shall be no less than 1,000 feet in width and shall be planted with a dense cover of native vegetation, preferably composed of native conifer trees, to adequately screen the landfill facility from adjacent neighbors and roadways.
- GR U-3.1.6** No new proposed MSW landfill or any proposed expansion of an existing MSW landfill shall be located in a floodplain unless an Environmental Impact Statement (EIS) using the best available science unequivocally indicates that the facility will not restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in a washout of solid waste and pose a hazard to human health or the environment.
- GR U-3.1.7** Any plan for a proposed MSW landfill or any proposed expansion of an existing MSW landfill shall describe in detail the corrective action programs to be initiated if groundwater contained within the aquifer or surface water is contaminated. Thus an application's site monitoring and remediation plan should be resolved during the site selection process and not later in an anticipated construction and operation permit application.
- GR U-3.1.8** Any formal application to expand laterally the size of any public or private MSW landfill currently existing in the plan area shall be subject to a number of considerations:
- GR U-3.1.8.1** Such older landfills must meet newer County, state and federal regulations and are not eligible for regulatory waivers of newer waste management standards.
  - GR U-3.1.8.2** A mandatory EIS must adequately address alternatives to the proposed expansion including, at a minimum, other alternative in-county locations as well as long-hauling, with data found to be acceptable by reputable third parties such as the Environmental Protection Agency and the U.S. Army Corps of Engineers.
  - GR U-3.1.8.3** The mandatory EIS must fully document, based on public/private records and the best available science, the historical impact of the current facility on contamination to any sole source aquifer located under the facility. A full and faithful record shall be compiled by the Tacoma-Pierce County Health Department (TPCHD) to reflect incidents of failure to contain waste, litter, leachate, and toxic air emissions from the landfill, and shall be considered in the review process.

- GR U-3.1.8.4 Any EIS review of a proposal shall be subject to review by the U.S. Environmental Protection Agency (40 CFR 232), the U.S. Army Corps of Engineers (33 CFR Part 323), and the U.S. Fish and Wildlife Service when wetlands, aquifers, and streams may be negatively impacted. Such review shall pertain even if no federal financial assistance is involved.
- GR U-3.1.8.5 No expansion shall be permitted to any MSW landfill currently sited over a sole source aquifer, in a critical aquifer recharge area, or in a wellhead protection area in the plan area and grandfathered by virtue of establishment prior to the April 27, 1999 effective date for RCW 70.95.060.
- GR U-3.2 Conduct adequate monitoring and testing of MSW landfill facilities to ensure that the facility is not posing any negative impacts to public health, safety, and welfare nor resulting in any unmitigated environmental impacts.
  - GR U-3.2.1 The TPCHD shall produce an annual written report on the research and field testing of contaminants found in the groundwater at any current or future approved MSW landfill site within the plan area. TPCHD shall provide a copy of such report to water purveyors and landowners within a 10-mile radius of such sites.
  - GR U-3.2.2 The TPCHD shall require MSW permit holders to provide monitoring and testing information in an acceptable electronic format.
  - GR U-3.2.3 The TPCHD shall be the responsible agency for ensuring that proper and appropriate monitoring and testing is conducted on MSW landfills. The TPCHD may oversee the hiring of neutral, third party consultants to conduct the necessary monitoring and testing or may complete such monitoring or testing with adequately trained TPCHD staff.
- GR U-3.3 Ensure that all plans and reports regarding monitoring and testing of MSW landfills in the plan area are readily available to citizens.
  - GR U-3.3.1 The TPCHD shall post monitoring and testing information regarding MSW landfills on a public web page and in all local newspapers of general distribution. This information shall include hydrogeologic and groundwater monitoring reports, leak detection, and collection system monitoring reports, leachate monitoring reports, and surface water monitoring reports.

## IMPLEMENTING ACTIONS

The following list of actions needs to be completed in order to implement the policies contained within this plan. They are arranged according to the timeframe within which each should be completed: short, medium, or long term. Short-term actions should occur within one year of plan adoption. Mid-term actions should be completed within 2-5 years. Long-term actions should be completed within 5-10 years of plan adoption. The entity or entities responsible for leading the effort to complete the action item is listed in parenthesis following

the action. Actions are assigned to the Land Use Advisory Commission (LUAC), Pierce County Planning and Land Services (PALS), Pierce County Economic Development (ED), Pierce County Parks and Recreation (Parks), Pierce County Public Works & Utilities (PWU), and Tacoma-Pierce County Health Department (TPCHD).

## SHORT TERM ACTIONS (UPON PLAN ADOPTION TO 1 YEAR)

### Domestic Water

1. Provide Letters of Water Availability to the Graham Land Use Advisory Commission and the Pierce County Hearing Examiner for consideration during the public hearing process. (PALS)
2. Amend the Pierce County Comprehensive Plan to include language regarding protecting water rights for designated Agricultural Resource Lands. (PALS)

### Law Enforcement and Fire Protection

3. Establish a process for local fire district review and comment on development proposals. (PALS, FPB, Graham Fire District)

### Stormwater Facilities

4. Amend Title 18J, Design Standards and Guidelines to establish stormwater detention facility design standards and/or work with PWU-Water Programs Division to develop new Guidelines for Design of Public Stormwater Facilities. (PALS, PWU-Water Programs)

### Undergrounding of Utilities

5. Amend the Pierce County Manual on Accommodating Utilities to include provisions for the undergrounding of overhead utility lines within the County right-of-way. (PWU)

### Parks

6. Establish a park impact fee, land dedication or fee-in-lieu-of dedication program for community and neighborhood level parks within the plan area. (PALS, Parks and Recreation)
7. Amend the Pierce County Development Regulations to require the dedication of regional trails or a fee-in-lieu-of land dedication during the site development process and to require the installation of nonmotorized transportation trails that connect new developments to schools, parks, or adjacent developments. (PALS, Parks and Recreation)
8. Amend Title 18J, Development Regulations – Design Standards and Guidelines to incorporate park and recreation design and location criteria. (PALS, Parks)

### Transportation

9. Amend Titles 17B, 18J, and the “Manual on Design Guidelines and Specifications for Road and Bridge Construction in Pierce County” to:

10. Require multiple access points into and out of developments and road extensions or stub roads to adjacent parcels for present and future roadway development and connectivity;
11. Provide pedestrian and bicycle facilities within and abutting new developments;
12. Institute new parking standards for on-street parking, driveway lengths, off-street parking, towing enforcement, minimum lot widths and side yard setbacks in developments within urban areas. (PALS, PWU-Transportation)
13. Amend the Pierce County Capital Facilities Element and Pierce County Transportation Plan to include transportation improvement projects identified in the plan. (PWU-Transportation)
14. Amend the Pierce County Nonmotorized Transportation Plan to update with Proposed Trail System Map recommendations. (PWU-Transportation)
15. Incorporate the Plan's transportation project priorities into Six-Year Transportation Improvement Program project selection process. (PWU-Transportation)

## MID-TERM ACTIONS (1-5 YEARS)

### Domestic Water

1. Initiate water conservation measures. (PWU – Sewer and Water Utility Division and local water purveyors)
2. Amend the Letter of Water Availability form to require additional information about water rights and existing and available water capacity to serve new development. (TPCHD, PALS)
3. Establish the Pierce County Water Utility to provide wholesale water to water purveyors operating within Pierce County. (PWU – Sewer and Water Utility Division and local water purveyors)

### Public Schools

4. Work with the Pierce County Council to increase Bethel School District impact fees. (Bethel School District)

### Solid Waste

5. Consider incorporating more detailed solid waste facility siting criteria and monitoring and remediation plan requirements in the next update of the Pierce County Solid Waste Management Plan. (PWU-Solid Waste, TPCHD)
6. Post a detailed summary of existing landfill monitoring and testing information on the TPCHD website. (TPCHD)

### Parks

7. Finalize the Frontier Park Master Development Site Plan and implement the Plan through approval by the County Hearing Examiner. (Parks, PALS)
8. Identify and maintain a list of civic, community groups and local governmental agency contacts that are interested in park and recreation development in the Graham area. (Parks)



9. Initiate the community review process for the concept of creating a local park district or service area for the development of community and neighborhood level parks within the plan area. (Parks)
10. Pursue partnership opportunities for the acquisition of regional, neighborhood and community park sites. (Parks)
11. Form a joint partnership to increase recreational opportunities within the plan area. (Parks, Local School Districts)
12. Expand walking trails at Frontier Park. (Parks)

### Transportation

13. Evaluate the speed limit on 224th St. E. between 82nd Ave. and Meridian to determine the feasibility of reducing the speed limit to 35 miles per hour or implementing other speed reduction methods. (PWU-Transportation)
14. Evaluate the feasibility of additional transit routes, increased bus frequencies, and additional bus pullouts. (Pierce Transit, PWU-Transportation)
15. Increase the number of transit stops, which include shelters and seating, at identified community centers. (PWU-Transportation, Pierce Transit)
16. Construct drainage improvements to address flooding issues along 224th St. E. (PWU – Water Programs, PWU-Transportation)
17. Refine concepts for traffic and nonmotorized circulation within the Graham RAC and incorporate into development review process. (PWU-Transportation, PALS, Washington State Department of Transportation, private developers)
18. Install emergency warning signage at the intersection of 200th St. E. and Orting-Kapowsin Highway that directs traffic away from the Puyallup Valley in the case of a natural disaster event. (PWU-Transportation, DEM)

## LONG TERM ACTIONS (5-10 YEARS)

### Domestic Water

1. Evaluate the merger of Class A and unused or underutilized Class B water systems. (PWU – Sewer and Water Utility Division, WDOH, TPCHD)

### Law Enforcement and Fire Protection

2. Locate a police substation within the plan area. Give priority to the following areas:
3. Graham Library property
4. Graham Fire Department station
5. 304th St. E. and Meridian Rural Activity Center (Sheriffs Department)

### Parks

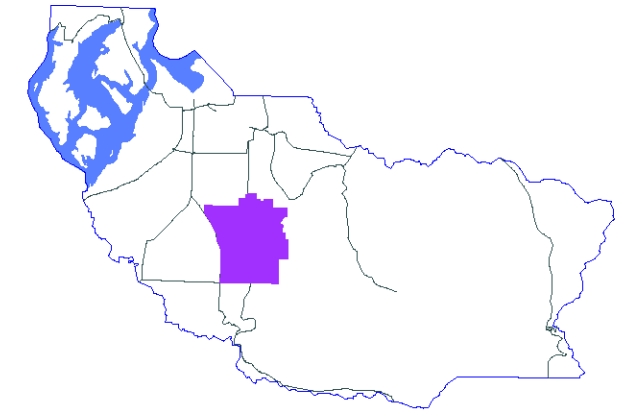
6. Acquire additional parcels of land for future park and trail development. (Parks and Recreation)

## Transportation

7. Evaluate the feasibility of a rail stop in or near the Graham Rural Activity Center located at 224th St. E. and Meridian. (PWU-Transportation, Pierce Transit, Tacoma Rail Mountain Division)



# Pierce County, Washington



## Water Systems

- Class B Wells
- Served by Class A Water System

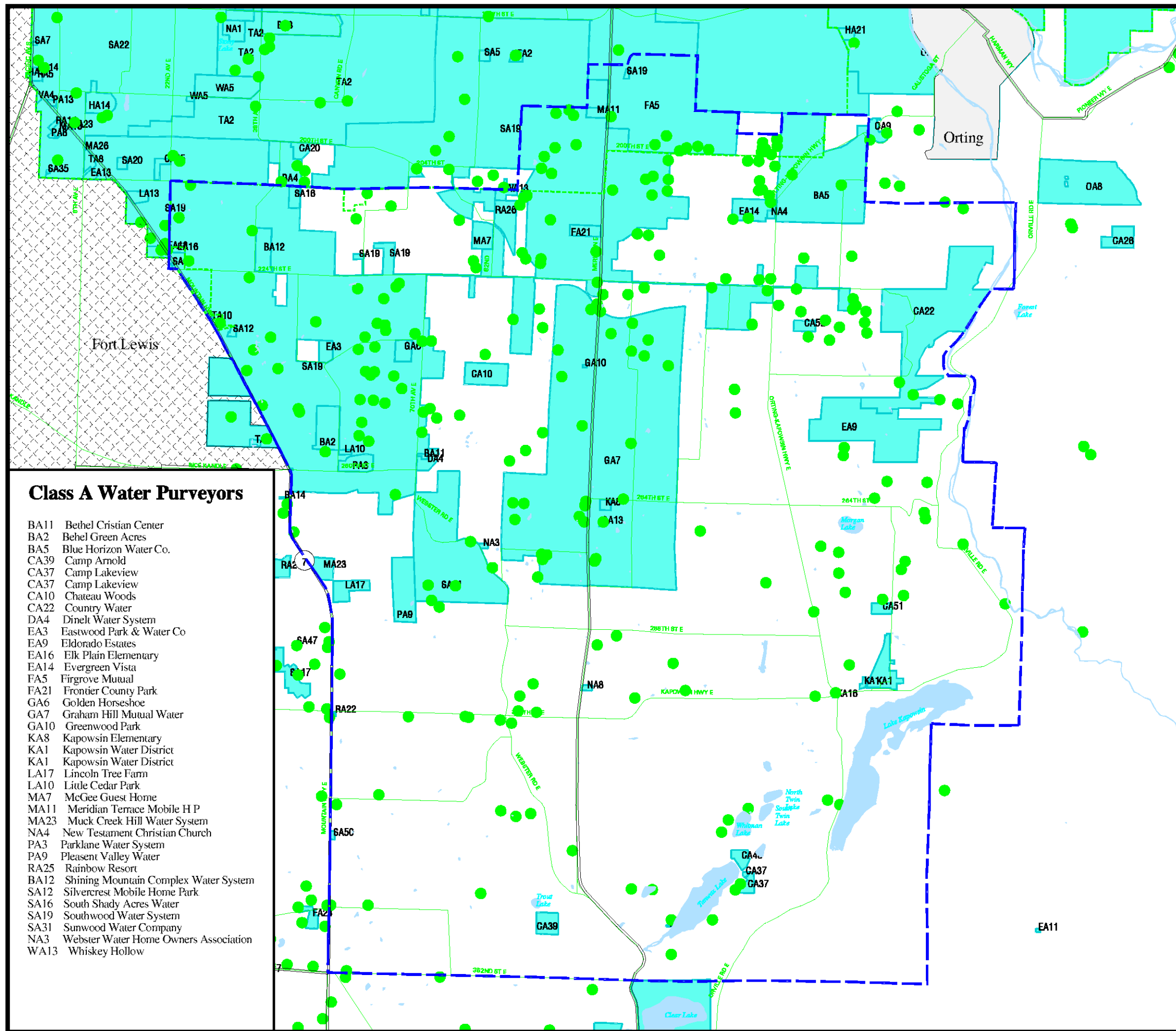
- Comp. Urban Growth Area Boundary
- Graham Community Plan Boundary



Department of Planning and Land Services

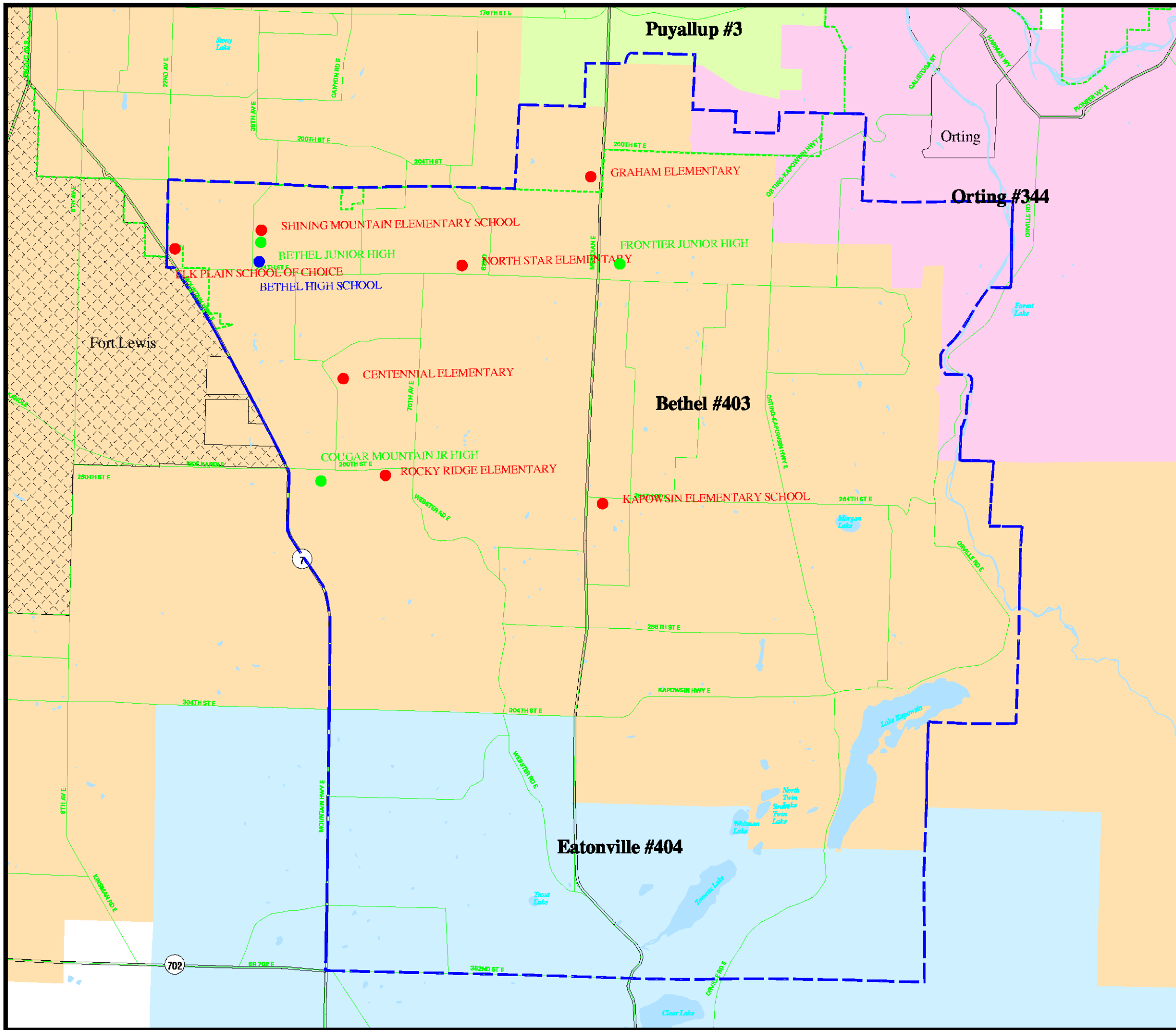
Plot Date: April 19, 2006

# Graham Community Plan

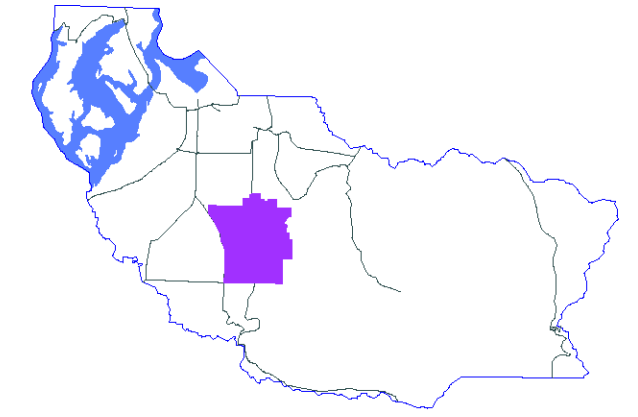


### Class A Water Purveyors

- BA11 Bethel Cristian Center
- BA2 Behel Green Acres
- BA5 Blue Horizon Water Co.
- CA39 Camp Arnold
- CA37 Camp Lakeview
- CA10 Chateau Woods
- CA22 Country Water
- DA4 Dinelt Water System
- EA3 Eastwood Park & Water Co
- EA9 Eldorado Estates
- EA16 Elk Plain Elementary
- EA14 Evergreen Vista
- FA5 Firgrove Mutual
- FA21 Frontier County Park
- GA6 Golden Horseshoe
- GA7 Graham Hill Mutual Water
- GA10 Greenwood Park
- KA8 Kapowsin Elementary
- KA1 Kapowsin Water District
- KA1 Kapowsin Water District
- LA17 Lincoln Tree Farm
- LA10 Little Cedar Park
- MA7 McGee Guest Home
- MA11 Meridian Terrace Mobile H P
- MA23 Muck Creek Hill Water System
- NA4 New Testament Christian Church
- PA3 Parklane Water System
- PA9 Pleasant Valley Water
- RA25 Rainbow Resort
- BA12 Shining Mountain Complex Water System
- SA12 Silvercrest Mobile Home Park
- SA16 South Shady Acres Water
- SA19 Southwood Water System
- SA31 Sunwood Water Company
- NA3 Webster Water Home Owners Association
- WA13 Whiskey Hollow



**Pierce County, Washington**



**Public Education**

**--Schools--**

- Elementary School
- Junior High School
- High School

**--School Districts--**

- Puyallup (District #3)
- Orting (District #344)
- Bethel (District #403)
- Eatonville (District # 404)

- Comp. Urban Growth Area Boundary
- Graham Community Plan Boundary



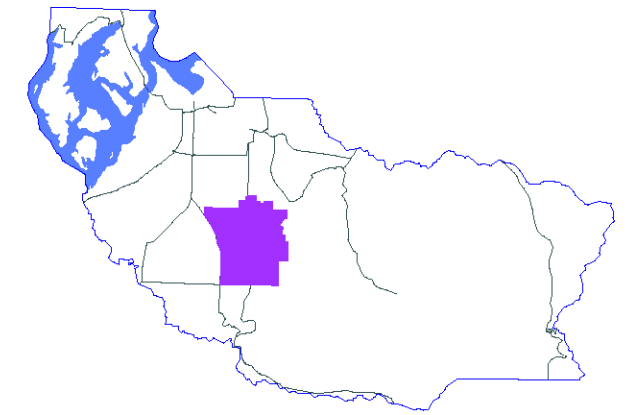
Department of Planning and Land Services

Plot Date: February 07, 2006

**Graham  
Community Plan**



Pierce County, Washington



**Proposed Parks and Trails**

- Proposed Park Addition
- Proposed Trail Addition

**Existing Parks Recreation & Open Space**

- Park
- Golf Course
- Open Space
- K thru 12 Education
- Wildlife Preserve
- Conservation Future

**Bike Routes**

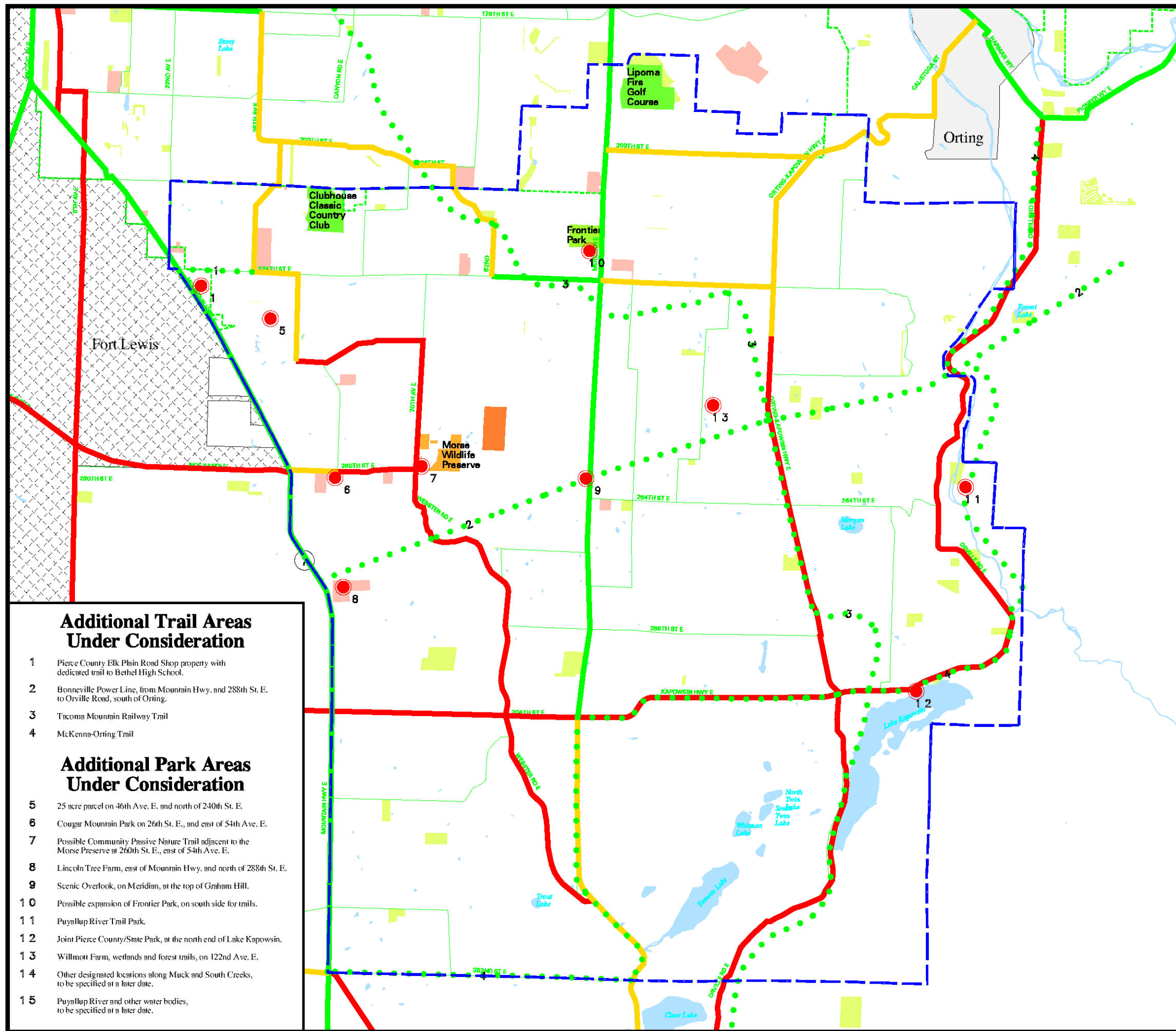
- ↘↗ Low Traffic Road
- ↘↗ Heavy Traffic, Paved Shoulder
- ↘↗ Heavy Traffic, No Shoulder
- - - Comp. Urban Growth Area Boundary
- - - Graham Community Plan Boundary



Department of Planning and Land Services

Plot Date: December 07, 2005

**Graham Community Plan**



**Additional Trail Areas Under Consideration**

- 1 Pierce County Elk Plain Road Shop property with dedicated trail to Bethel High School.
- 2 Bonneville Power Line, from Mountain Hwy. and 288th St. E. to Orville Road, south of Orting.
- 3 Tacoma Mountain Railway Trail
- 4 McKenna-Orting Trail

**Additional Park Areas Under Consideration**

- 5 25 acre parcel on 46th Ave. E. and north of 240th St. E.
- 6 Cougar Mountain Park on 26th St. E., and east of 54th Ave. E.
- 7 Possible Community Passive Nature Trail adjacent to the Morse Preserve at 260th St. E., east of 54th Ave. E.
- 8 Lincoln Tree Farm, east of Mountain Hwy. and north of 288th St. E.
- 9 Scenic Overlook, on Meridian, at the top of Graham Hill.
- 10 Possible expansion of Frontier Park, on south side for trails.
- 11 Puyallup River Trail Park.
- 12 Joint Pierce County/State Park, at the north end of Lake Kapowsin.
- 13 Willmott Farm, wetlands and forest trails, on 122nd Ave. E.
- 14 Other designated locations along Muck and South Creeks, to be specified at a later date.
- 15 Puyallup River and other water bodies, to be specified at a later date.

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## Chapter 7: Plan Monitoring

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The 1990 State Growth Management Act (GMA) requires jurisdictions planning under GMA to report on progress made in implementing the Act, and to subject their comprehensive plans to continuing evaluation and review. As part of the County's Comprehensive Plan, the Graham Community Plan is subject to this requirement. One mechanism for conducting this evaluation and review is to monitor the development standards, regulations, actions, and other programs called for in the plan for the purpose of determining their effectiveness in fulfilling the vision of each of the five elements of the plan.

Monitoring actions may include the development and implementation of regulations and design standards, coordinating the provision of facilities and services, developing educational programs and handouts, acquiring parks, preserving open space, and other actions. Information obtained from the monitoring program can be used to offer recommendations to decision makers as to what changes to the community plan may be needed in order to attain specified goals and meet the visions in the plan.