

Introduction

The purpose of the City of Elma Comprehensive Land Use Plan is to establish goals and specific policies for managing growth in and around the community over the next 20 years. The framework and content of the plan comes from two important, yet distinct sources.

Washington State law is the first one. The plan satisfies the legal requirements for Planning and Zoning in Code Cities, Chapter 35A.63 RCW. It contains the minimum land use and transportation planning elements mandated by that law, as well as other optional elements generally conforming to the Growth Management Act, Chapter 36.70A RCW. The plan also gives substantive authority for Threshold Decisions made under the State Environmental Policy Act as provided under WAC 197-11-660.

The second and most important source is the local community. The plan is a shared statement by residents, property owners, and businesses about their vision for the future of Elma. It explains how citizens will work together in guiding public and private development decisions that affect land use, housing, public facilities and services, transportation, utilities, parks and recreation, and economic development. It is a determined effort by citizens to make proactive choices to guarantee that Elma stays just the way they like it in light of future change.

The organization of the Comprehensive Land Use Plan is simple so to facilitate its use by the community and city officials. It has two parts. Part I is the Goals and Policies for Future Development. This section begins by reciting the overall goals articulated at the January 2001 community Futuring Workshop. These goals, along with the results of the community survey, served as the foundation to the policies prepared by the Planning Commission that follow. City officials use these policies for evaluating public and private applications for development and planning improvements for public facilities and services, transportation, parks and recreation, utilities, and economic development.

Part II contains a Technical Data Report on the natural and human environments in and around Elma to aid a plan user in understanding and applying the goals and

policies in Part I. The information contained in the Technical Data Report is from published sources listed in the bibliography and the oral testimony of city officials and the Planning Commission members at workshop sessions.

It is important for the reader to note that the Comprehensive Land Use Plan is not an all-inclusive, stand-alone document guiding all city actions. Rather, the Comprehensive Land Use Plan works in conjunction with other city plans serving important needs in the community. Currently, these plans include the:

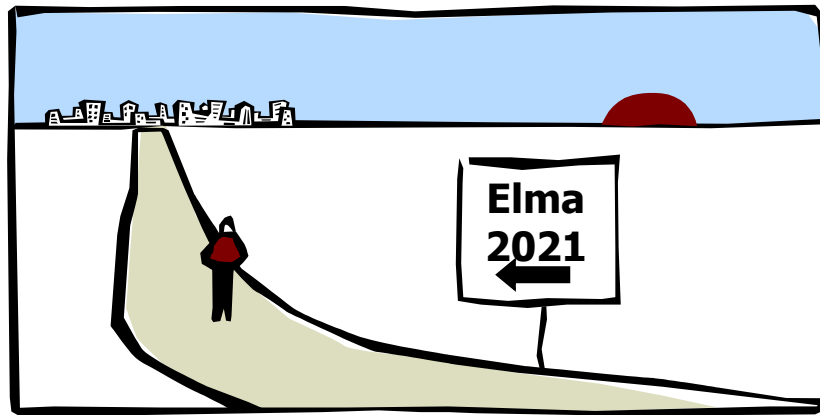
- Water System Plan
- General Sewer and Facilities Plan
- Capital Facilities Plan
- Community Development and Housing Plan
- Six-Year Transportation Improvement Program

The Comprehensive Land Use Plan, however, sets the standard for consistency that other plans must meet, especially in how they affect future land uses in the city.

Part I:

Goals and Policies for Future Development

Our goals to plan for change...



...in the right direction!

The City of Elma will guide growth over the next 20 years to:

- Create a clean and prosperous small town
- Improve and expand public facilities & services
- Bring more economic development opportunities that benefit the town
- Prepare and implement a stormwater & flood control plan
- Establish more efficient city boundaries
- Move people and vehicles safely around the community
- Expand recreation & educational opportunities for residents

Policies for Future Land Use

Future land uses in Elma shall reflect the traditional rural character of the past while encouraging compatible new uses that contribute to the social and economic vitality of tomorrow. The Land Use Element accomplishes this goal with guiding policies that separate incompatible uses, controls future growth, and manages environmental assets and constraints. These policies seek a fair balance between the public interest and individual private property rights.



Separating Incompatible Uses: Establishment of Residential, Commercial, and Industrial Land Use Districts

The city will protect traditional development patterns by separating land uses into appropriate zoning districts. *The designations of the land use districts, herein, are for broad, general areas, and the boundaries between each classification are transitions between the various uses. As such they should be interpreted in a flexible manner rather than a rigid line, unless specifically stated.* The Future Land Use Map on the next page shows the location of these zoning districts in the city. They include:

The General Residential (G-R) District

The General Residential District promotes residential development along the same traditional neighborhood patterns that exist in Elma today. While remaining predominately single-family in character, the district also accommodates a wide-range of other complementary housing opportunities and land uses.

- Future single-family homes shall not exceed a density of six dwelling units per net acre.
- Two-, three-, and four-unit homes shall not exceed a density of nine dwelling units per acre.
- Apartments with five or more units shall not exceed a density of 20 dwelling units per acre. Apartments are conditional uses that meet specific

Note: Underlined, bold text above amended into text by City Council adoption of resolution number 471 on January 6, 2003.

Figure 1. Future Land Use Map

development standards that ensure their compatibility with the surrounding neighborhood.

- Churches, hospitals, convalescent facilities, public and private educational facilities, country clubs, community centers, parks, open spaces, and public facilities are conditional uses in the district. These uses shall have access to city arterials or state highways as well as minimize noise, traffic, and glare impacts on area residential properties.
- Manufactured home parks are conditional uses of at least two acres in area allowed under binding site plans that meet specific development standards that ensure compatibility with the surrounding neighborhood.
- Clustered housing developments that preserve open space or critical areas and meet city subdivision laws are encouraged in the General Residential District.
- Accessory structures and uses incidental to the primary use on the property. Examples of structures include garages, sheds, and greenhouses. Examples of uses are home occupations.

The Rural Residential (R-R) District

The Rural Residential District is a large lot, low-density residential area that provides the opportunity for urban residents to enjoy rural-like amenities on a smaller scale.

- This district allows only single-family homes at densities of 4.4 dwelling units per acre.
- Agricultural activities are a permitted activity in this district, including the keeping of farm animals and other pets when done in accordance with the city code.
- Accessory structures and uses incidental to the primary use on the property. Examples of structures include garages, sheds, and greenhouses. Examples of uses are home occupations.
- It is consistent with this plan to allow parcels in the Rural Residential District to rezone to the General Residential District if sewer and water utilities are available

to the property; provided, however, that properties subject of such rezones shall be brought into conformance to all requirements of the General Residential district upon approval of the rezone.

The Community Business (C-1) District

The Community Business District serves the everyday consumer needs of city residents, the surrounding area, and visitors.

- The C-1 District includes the traditional downtown area and the West Main (15th and Main Streets) commercial area. Future development in these areas should mirror existing land use patterns of locating structures at the front of lots.
- Typical permitted land uses in the Community Business District are offices, retail stores, and personal service establishments. These include small to medium-size retail stores, food and beverage establishments, personal services businesses, entertainment places, small-scale visitor accommodations, and financial and professional businesses. It also hosts important cultural, religious, and governmental institutional uses.
- Land uses in the district occur on lots 2,500 square feet or greater in area.
- The district recognizes the rights of existing single-family homeowners to maintain, expand, or improve their properties. A property owner may replace a home on a parcel that had a home in the previous 12 months. However, new homes on lots in the district are not permitted or conditional uses.
- It is consistent with this plan to expand the C-1 District to properties in the G-R District along the west side of Second Street between Martin and Eaton Streets. Applications for such conversions shall happen on a parcel-by-parcel basis and clearly state the proposed use.

The Neighborhood Commercial (C-2) District

The Neighborhood Commercial District is a residential district identical to the General Residential District, but allows small-scale professional services limited to

licensed health care professionals and offices serving professional services such as accounting, financial counseling, engineering, surveying, and architecture. This district shall never extend north or south of the alleyway along Main Street. The Neighborhood Commercial District protects and preserves the residential character of the existing neighborhood while allowing only limited, compatible personal and professional business activities.

- To ensure the compatibility of personal and professional activities with residential uses, development regulations for the district shall place restrictions on commercial activities regarding location, site design, gross floor area, hours of operation, and bulk and size requirements.
- It is consistent with this plan to rezone properties in the General Residential District along Main Street to Neighborhood Commercial District one parcel at a time to ensure a slow transitional process. Any applicant requesting such a rezone shall show that the activity and design of the proposed use will not detract from the residential character of the surrounding area.

The General Commercial (C-3) District

The General Commercial District accommodates a wide range of large retail, warehousing, storage, and light-manufacturing activities that demand larger lot sizes to deliver goods and services to the public and other businesses.

- Areas appropriate for this district have direct access to city arterials, state highways, and rail lines.
- Land uses appropriate for in this district may include:
 1. Large retailers, tourist facilities and accommodations, warehousing, or other businesses that need outdoor storage of goods or materials for retail trade.
 2. Businesses in enclosed structures that repair, manufacture, process, or assemble products that do not create noise, glare, vibration or odor impacts beyond the property may exist as conditional uses in this district.

3. Activities and structures relating to rail and trucking transshipment shall locate along rail lines and major arterials. Development regulations shall manage new or expanded transshipment activities or structures as conditional uses to ensure that design and location shall minimize disturbance to properties in the surrounding area.

The Industrial (I) District

The Industrial District provides space for intensive manufacturing, processing, commercial, storage, and transshipment activities that meet environmental regulations but may require separation from residential and commercial uses in the city.

- The most appropriate areas for the Industrial District lie south of US Highway 12 and west of SR 8.



Room to Grow: Managing Future Growth within the Elma Urban Growth Area

The City of Elma forecasts a population of 5,000 within its future city limits by the year 2021. This forecast reflects current populations within the Elma Urban Growth Area as well as a net increase of about 1,180 over the next twenty years. The map on the next page shows the boundary of the Elma Urban Growth Area.

The city policies below direct how and where this growth will occur in a way that is cost effective for taxpayers and protects the natural environment.

- There will be a need for approximately 475 housing units to accommodate a future population increase of 1,180 people. Of these new housing units, there is a projected need for 331 single-family homes and 142 multi-family units. At current median housing densities, there will be need for at least 88 gross acres of residential land to address future growth.
- To serve the needs of this population increase, there will be a need for at least 91 additional gross acres for future commercial, industrial, public facilities, cultural/religious, and open space land uses.
- Because infrastructure construction and maintenance is expensive, it is more cost effective for the city to emphasize growth on vacant lands within the city limits than beyond its current city boundaries. The city can encourage infill growth by creating and implementing strategies for extending infrastructure improvements to these areas.
- Service area extensions for the sewer and water systems shall not contribute to sprawl development outside of the Urban Growth Area that is detrimental to ground and surface water supplies used by city residents. Therefore, the city shall not extend water service to new or existing residential development

Figure 2. Urban Growth Area

beyond the city limits on highly permeable soils that exceed densities greater than two dwelling units per acre.

- The city should aggressively annex those properties in the Urban Growth Areas with urban densities that currently receive city water service.
- To avoid incompatible land use or infrastructure conflicts after annexation, the city shall require new residential and commercial development in the Urban Growth Area requesting connection to the city sewer or water system to meet all city requirements for streets, zoning, and other public improvements.



Environmental Resources: Managing Environmental Assets and Constraints

The City of Elma and its future Urban Growth Area has environmental resources that offer unique assets and constraints for the community. Development actions that ignore the presence of these resources can be costly or create significant health and safety hazards for landowners and all taxpayers. Therefore, the city shall use the policies below to balance development interests with the environment in a way that is sustainable for both.

Policies for Managing Development on Soils

- Require development proposals on soils with moderate or severe slopes to undergo geo-technical analysis to ensure the safety of on-site and area property owners.
- Limit growth on soils with steep slopes or seasonal flooding by limiting densities and encouraging preservation of open space through cluster subdivisions.

Policies for Protecting Surface and Ground Water Resources

- Protect the city's groundwater resources as a potable water supply source by not allowing future development relying on-site sewage disposal systems to locate on highly permeable soils.
- Expedite connection to the sewer system for those homes and businesses in the city that are on highly permeable soils and still use on-site sewage disposal systems.
- Eliminate non-point and point pollution from entering ground and surface waters.

Policies for Managing Wetlands

- Protect wetlands for flood and stormwater management as well as areas for recharging groundwater supplies.
- Future development shall not result in any net loss of wetlands.
- Development proposals shall not interfere with the function or quality of wetlands.

Policies for Managing Frequently and Seasonally Flooded Areas and Stormwater

- Prepare a stormwater management plan for the city and the Urban Growth Area that identifies flooding problems and solutions.
- Retain, improve, and maintain natural drainage patterns in the city by avoiding their conversion to urban uses.
- Avoid or use caution when annexing areas in flood zones or prone to seasonal flooding. Evaluate the potential for future development in those areas to increase flooding problems.
- Work with Grays Harbor County to minimize future residential growth south of the freeway to preserve its function as a natural flood plain for the Chehalis and Cloquallum Rivers.

- Discourage high-density residential development in flood plains or areas susceptible to seasonal flooding by allowing only low intensity residential and commercial land uses.
- Work with WSDOT and county officials to prevent potential flooding in the city caused by actions resulting from the state highway maintenance or development actions outside of the city.

Policies for Housing and Neighborhoods

Elma's homes and neighborhoods are the heart and soul of this rural community. The affordability of homes, the wide variety of housing choices, and the attractive neighborhood settings make Elma a great place to live. Protecting, improving, and enhancing these assets is a strongly voiced priority by Elma residents.

The Comprehensive Plan adopts the following policies for future housing and neighborhoods in Elma:



Promoting Affordable Housing of Choice

- Continue the present mix and density of single- and multi-family housing through flexible and innovative development regulations.
- Regularly evaluate development regulations to reflect changes in housing trends that promote greater affordable housing of choice.
- Encourage the use of cluster subdivisions to reduce infrastructure costs without increasing overall density.
- Remove barriers in development regulations to housing opportunities for people with special needs.



Continuing Traditional Residential Development Patterns

- Restrict singlewide manufactured homes to manufactured home parks because they do not blend in with traditional Elma residential development patterns.
- Keep all commercial activities other than home occupations separate from residential areas except as provided in the Neighborhood Commercial District.



Protecting and Improving the Quality of Neighborhoods

- Develop strategies for gradually upgrading streets, constructing sidewalks, and connecting storm drainage systems to all neighborhoods.

- Develop and enforce effective ordinances that clean up properties by limiting the storage of junk cars, building materials, and other refuse.
- Protect the city's existing housing stock by encouraging housing organizations like Aberdeen Neighborhood Housing Services, Habitat for Humanity, and Christmas in April to offer assistance to Elma homeowners to improve their Properties.
- Encourage the organization of a Community Clean-Up Week that would help residents beautify their neighborhoods and other areas of the city.

Policies for Public Facilities and Services

The lifeblood that sustains Elma as a community is its public facilities and services. The city's capacity to handle future growth largely depends on whether public facilities and services will be available at an acceptable minimum level of standards when demand happens. The City of Elma intends to meet this challenge by continuing to provide a wide-range of public facilities and services to the community in a cost effective and efficient manner. Public facilities in Elma include: water system, sewer system, stormwater system, and city-owned buildings and properties. Public services in the community are: general administration, police and fire protection, planning, and public works.

The city will ensure the continuation of this goal through the implementation of the following policies:



Priorities for Managing Existing Public Facilities and Services

- City expenditures on public facilities and services should reflect the following priorities:
 1. Address urgent or emergency conditions that are dangerous to public health or safety;
 2. Correct existing deficiencies;
 3. Meet the needs of planned growth identified in this plan;
 4. Add new public facilities and services identified in this plan; and,
 5. Add new or expand public facilities not identified in the Comprehensive Plan or other public facility plans.
- The city shall not approve any development that creates future conditions that will reduce the capacity of existing public facilities and services from meeting adopted minimum level of service standards in the Capital Facilities Plan.



Maintaining and Expanding Public Facilities and Services: Paying for Public Facilities and Services

- All city residents and businesses shall contribute equally to correcting existing deficiencies or for new or expanded facilities that benefit everyone.
- The city shall generate sufficient revenues for its public facilities and services to maintain and operate them at established level of service standards.
- Growth will pay its own way through requirements for subdivisions, charges for utility hook-ups, and on- and off-site impacts identified through the State Environmental Policy Act Environmental Review process.
- The city shall actively seek grants and low- or no-interest loans to reduce cost burdens on property owners for extending or correcting infrastructure serving existing neighborhoods and businesses.



Public Facilities Requirements for New Development within the City

- All new development shall connect to the city water system.
- All new development shall connect to the city sewer system; except, however, new single-family homes built on lots existing before the adoption of this Comprehensive Plan and which are further than 200 feet from the nearest sewer main.
- New development shall meet requirements for connecting to public facilities before occupancy occurs. The city reserves the right to deny approval to any application for development if such concurrency is not possible.



Working Together Effectively: Coordination of Public Facilities and Services Plans

- The city shall make future decisions regarding public facilities and services consistent with the Comprehensive Plan.

- The city shall regularly update its Sewer, Water, and Capital Facilities Plans so facilities and services will keep abreast with growth in Elma and its Urban Growth Area.
- The city shall regularly review and adjust the boundaries of its Urban Growth Area over the 20-year planning period if the city determines it cannot adequately provide public facilities and services at established service level standards.



Public Facilities and Capital Improvements

The Comprehensive Land Use Plan incorporates the public facilities and capital improvements by reference as provided in the documents listed below and as adopted by the Elma City Council:

- Water System Plan
- General Sewer Plan
- Capital Facilities Plan

Policies for Transportation Management

How Elma residents move about by vehicle, foot, and bicycle is an essential part of traditional development patterns in the community. People here value their ability to travel around the city in a safe and easy manner, a way of life they want to protect as growth occurs.

The city will implement this goal by managing its streets, alleys, and sidewalks by protecting public safety, assuring access to property, providing provisions for adequate parking, and encouraging the efficient flow of vehicles, bicycles, and pedestrians. This entails guiding future growth in line with the following transportation policies:



Managing Streets, Alleys, and Sidewalks for Safe and Efficient Travel

- The city requires all new development in the city, and for properties in the Urban Growth Area that receive water or sewer connection, to have access to a public right-of-way that meets city street standards.
- The design and construction of new streets will be capable of accommodating the anticipated future volume of traffic, including bicycles and pedestrians.
- Future street systems, especially in the Urban Growth Area, shall incorporate easily understood, direct routes.
- The design and construction of new streets shall plan for their logical extension to existing or future streets to assure efficient traffic circulation.
- The future design of streets should avoid or minimize their physical impact on the natural environment, especially those areas with flooding, poor soil conditions, steep slopes, or unique features.
- All new streets in the city and for properties in the Urban Growth Area that receive water or sewer connection shall meet the adopted "B" Level of Service Standard.

- All new streets in the city and for properties in the Urban Growth Area that receive water or sewer connection shall accommodate emergency services and vehicles.
- The city will develop and enforce design provisions that provide for adequate off-street parking for all land uses.
- The city will work with neighborhoods to upgrade existing streets and sidewalks. The city shall actively seek grants and low- or no-interest loans to reduce cost burdens for property owners for such improvements.
- The installation of sidewalks and streetlights is required for all new developments.
- The development of an alternate route from the Strawberry Hill area will be necessary to accommodate significant additional development in that area.
- The city shall work with the Puget Sound and Pacific Railroad Company to ensure the safety of vehicles and pedestrians at all railroad crossings.
- The city should work with Grays Harbor County and the Washington State Department of Transportation to develop and build a pedestrian bridge over SR 12 to allow safe access from the community to the Vance Creek County Park.



Maintaining and Expanding the Transportation System: Paying for Public Streets, Alleys, and Sidewalks

- All city residents and businesses shall contribute equally to correcting existing deficiencies or for new or expanded streets, alleys, and sidewalks that benefit everyone.
- New development will pay its own way for streets, alleys, and sidewalks required through the city’s development regulations and the State Environmental Policy Act Environmental Review process.
- City expenditures on public streets, alleys, and sidewalks should reflect the following priorities:

1. Address urgent or emergency conditions that are dangerous to public health or safety;
2. Correct existing deficiencies;
3. Meet the needs of planned growth identified in this plan and the Six-Year Street Plan;
4. Add desired new streets or amenities.



Six-Year Transportation Improvement Program

The Comprehensive Land Use Plan incorporates the Six-Year Transportation Improvement Program by reference, as adopted by the Elma City Council.

Policies for Utilities

Elma needs adequate electrical, telephone, and natural gas services for future growth at the current or better level of service. Although the City of Elma does not deliverer these services, it can help utility providers meet specific public service obligations regulated by state and federal law. The city should work closely with utility providers to make them aware of the Comprehensive Land Use Plan and the potential impact of growth on traditional development patterns.

The city will follow the policies below for assuring the sufficient supply and appropriate provision of utilities for existing and future development:



Coordination and Cooperation between the City and Utility Providers

- The city will consult with utility providers annually to determine plans for expansion. The Planning Commission shall review the Comprehensive Land Use Plan to evaluate any impacts or opportunities created by new utility improvements or decreases in service.



Protecting Traditional Development Patterns: Utility Facilities and Corridors

- The location of major electrical and gas utility corridors should be outside of the city limits and Urban Growth Area.
- The city encourages utilities and public facilities to share the same corridors.
- Utility providers should appropriately design and screen facilities in neighborhoods and the downtown within the city and the Urban Growth Area to ensure visual compatibility with the character of the surrounding area.

Policies for Open Space and Community Parks & Facilities

Park and recreation facilities and open spaces are a central theme in defining Elma’s quality of life. It is a high priority for Elma residents to have access to a wide range of active and passive recreational opportunities, whether publicly or privately owned. The presence of open spaces consisting of forests, wetlands, and farms, preserve the unique rural character of Elma.

The city intends to further parks, recreation, and open space through the following policies and actions:



Creating a Livable Community for Tomorrow: Preserving Open Space and Community Parks

- Explore the potential acquisition of the Oakhurst Property from Grays Harbor County. This property offers unique mixed-use development potential that could retain undeveloped areas as a park, provide retail space oriented to the park setting or the outdoors, and feature cultural attractions, such as a historical museum with local connection.
- Develop a city Parks and Recreation Plan that provides strategies for developing the following project priorities:
 1. Teen center with activities
 2. Trails and walkways
 3. Natural areas
 4. Children play areas
 5. Community center for meetings and events
- Seek to reach the parks and recreation level of service standards adopted in the Capital Improvement Plan.

- Collaborate with Grays Harbor County to improve and expand the Fairgrounds as a regional tourist attraction that benefits Elma businesses.
- Encourage the retention of open space by allowing residential cluster developments.
- Require multi-family housing projects to provide shared on-site recreational or open space for tenants.
- Collaborate with Grays Harbor County in continued improvement of Vance Creek Park as a local and countywide park and recreation facility.
- Explore and promote opportunities with landowners in and beyond the Urban Growth Area to develop public and private recreation facilities that benefit the residents of Elma.

Policies for Economic Development

The city shall nurture the economic vitality of Elma by working hard to retain and attract commerce and industry in the community. Elma depends on its economy to create jobs for citizens and to generate much of the tax revenues that support city infrastructure, public services, parks, public safety, and schools. In addition, the Downtown core is the central focal point of the community for residents and visitors.

Therefore, the city shall contribute to building a strong, sustainable economy and downtown for Elma by implementing the following policies for guiding future growth in the city:



Creating Opportunities for Community Vitality: Encouraging Economic Development

- Maintain reserves within the city's sewer and water systems for serving future commercial and industrial growth as demand occurs.
- Conduct an annual review of the Future Land Use Map to evaluate if Elma has an adequate supply of appropriately zoned land for commercial and industrial for growth. Any expansion or retraction of commercial and industrial districts should stress compatibility with adjacent residential districts.
- Gain community acceptance of future expansion of commercial and industrial lands by adopting performance standards within development regulations that ensure compatibility between residential and non-residential land uses.
- Continue investing city and other public resources into upgrading public infrastructure in the downtown area.
- Adopt a unified design theme for streets, sidewalks, and public amenities for public right-of-ways within the downtown and other commercial centers in Elma.

- Assist private property owners in developing a façade improvement program for downtown buildings through federal or private funding resources.
- Work in cooperation with local businesses in encouraging the development of overnight accommodations in Elma.
- Collaborate with Grays Harbor County to improve and expand the Fairgrounds as a regional tourist attraction that benefits Elma businesses.
- Allow home-based businesses that do not detract from neighborhood character.

Policies for Local & Regional Planning

The formula for successful community planning in Elma depends on working effectively with its citizens, Grays Harbor County, and the State of Washington.

Citizens are the cornerstone to the decision making process. Their values, opinions, and knowledge are the best resource available to the city for charting the future growth of the community. The city regularly needs to seek their counsel regarding the validity of the guiding principles in the Comprehensive Plan, especially as unpredicted events occur.

Likewise, Elma is not an island in the sea. It shares common boundaries with Grays Harbor County and must meet state and federal laws and requirements. The need for cooperative land use planning is especially true in the Urban Growth Area, where Elma and Grays Harbor County share significant interests. The control of flooding is another area of concern for both jurisdictions.

Therefore, the City of Elma will further local and regional planning efforts through the following policies:



Better Community Decisions through Informed and Active Citizen Participation

- The Planning Commission shall schedule regular meetings to listen to community concerns, values, and ideas about future growth.
- The Planning Commission will hold an annual September meeting to monitor progress on meeting the goals and policies in the Comprehensive Plan and to discuss ideas for changes or additions. The Planning Commission in turn shall forward any recommendations for any changes and additions to the City Council for appropriate action.

- The city will share detailed information about plans and development projects with the community in advance of public meetings. The city should make sure relevant documents are available for public review at City Hall and the public library.
- Develop a set of procedures for public hearings that guarantee everyone can participate in an effective and respectful manner.
- Report to the community how the city used their comments to make decisions.



Planning Cooperatively with Grays Harbor County and the State of Washington

- The city shall pursue the development of a agreements with Grays Harbor County regarding the management of land uses in the Urban Growth Area. The best way to initiate this process is to have the Planning Commissions of both entities meet together to identify issues and alternatives for co-management of the area. Both commissions can then pass their recommendations for agreements to their respective legislative bodies for action.
- The city shall send official copies regarding development regulations and public facilities management to the Grays Harbor County Planning Commission and Board of County Commissioners.
- The city will provide information to the School District and other applicable special purpose districts to request their comment on proposed plans and projects.
- The city will continue to share information and work with other county jurisdictions through the Grays Harbor Council of Governments.

- The city will make every effort possible to make certain that city plans and regulations, especially pertaining to land use, public facilities extensions, and transportation, are consistent with Grays Harbor County and the State of Washington.

Procedures for Amending the Comprehensive Land Use Plan

The Planning Commission or City Council may initiate a proposal for amending the City of Elma Comprehensive Land Use Plan by passing a resolution. Citizens and property owners may also initiate a proposal for amendment by submitting a completed application form available through the City Clerk.

The following procedures shall govern the amendment process for text or map changes in the plan:

1. The resolution or application for amendment of the plan must specify the exact change(s) requested.
2. The resolution or application shall provide factual reasons why the amendment is necessary.
3. The applicant shall comply with the city State Environmental Policy Act as part of the application review procedure. The city's Responsible Official shall issue the Threshold Determination and forward it, along with the application, to the Planning Commission for their consideration.
4. The City Clerk or the Mayor's designee will transmit all related materials regarding the amendment to the Planning Commission.
5. The Planning Commission will review the amendment materials to determine its completeness. If they find the amendment materials incomplete, the Planning Commission will notify the applicant and request the missing information.
6. Upon receiving a completed application materials for amendment, the Planning Commission will schedule a public hearing and advertise it in accordance with RCW 35A.63.70.

7. After considering application materials and public testimony and the Planning Commission shall prepare a report with findings of fact and recommendation(s) and forward it to the City Council through the Mayor in accordance with RCW 35A.63.071.
8. Within sixty days from its receipt of the recommendation(s), the City Council at a public meeting shall consider the same. The City Council shall vote within 60 days of the public meeting to approve, disapprove, or to modify and approve the recommendation, or to refer it back to the Planning Commission for further proceedings, in which case the City Council shall specify the time within which the Planning Commission shall report back to the legislative body its findings and recommendations on the matters referred to it. The final form and content of the comprehensive plan shall be determined by the City Council. An affirmative vote of not less than a majority of total members of the City Council shall be required for adoption of a resolution to approve the plan or its parts. The comprehensive plan, or its successive parts, as approved by the City Council, shall be filed with the City Clerk and shall be available for public inspection.

Part II: Technical Data Report

SECTION A: THE NATURAL ENVIRONMENT

Location

The City of Elma is in the Lower Chehalis River Valley within eastern Grays Harbor County, Washington. The city limits extends over of parts of Sections 26, 27, 34, 35, and 36 of Township 18 North, Range 6 West and a part of Section 1, Township 17 North, Range 6 West. The center of the community is at longitude 122°22'25" and latitude 47°00".

The bulk of the community is north of the Olympic Highway (State Routes 8 and 12). Elma lies between several regional population centers. Olympia and Interstate 5 is 27 miles to the east and Aberdeen is 21 miles to the west. Centralia is 33 miles to the southeast. Nearby Grays Harbor County cities include McCleary (6 miles), Montesano (10 miles), and Oakville (21 miles). Mile 25 on the Chehalis River is about three-quarters of a mile south from of the city.

Climate

The weather in Elma is characteristic of inland-coastal marine climates bordered by mountain ranges. The summers are cool and comparatively dry while the winters are mild, wet, and cloudy. Rainfall averages 68.4 inches annually, with over 11 inches occurring in January and December. July and August are the driest months, averaging less than two inches of rain. Snowfall is generally light, averaging only 9½ inches each year between November and March. The average daily temperature is 51.2°. January records the coldest average temperatures, 34.5°, and August has the warmest average temperature of 69.5°.

Soils

There are 14 different soil series within Elma that present varying degrees of suitability for development. Factors that influence the suitability of soils for development include slope, potential for flooding, depth-to-water table, depth-to-bedrock, potential for frost action, potential for erosion, and drainage capabilities. An aerial map of soil-type locations and tables covering their characteristics follows on the next three pages.

The five soil-types that offer the least development constraints based on these factors are:

- Carstairs very gravelly loam (23)
- Centralia silt loam (27)
- Lyre very gravelly loamy sand (71)
- Satsop silt loam (128)
- Spanaway very gravelly sandy loam (135)

The topography of these soils is relatively flat or no greater than 8% in grade. Existing development in Elma is predominately on these soils. The soils that cover the largest areas are the Carstairs very gravelly loam (23), Centralia silt loam (27), and Satsop silt loam (128).

Soils that present moderate limitations to development, generally due to slope or wetness, include:

- Centralia silt loam (28) - slope
- Montessa silt loam (79) – wetness, depth to water table
- Nemah silty clay loam (91) – wetness, depth to water table
- Norma sandy loam (101) – wetness, depth to water table

Soils that present severe limitations for development due to slope, extreme wetness, flooding, and erosion are:

- Buckpeak silt loam (14) - slope
- Centralia loam (29) - slope
- Chehalis silt loam (30) - flooding
- Humptulips silt loam (48) - flooding
- Rennie silty clay loam (125) – flooding

Figure 3: Soils Map for City of Elma and Vicinity

Table 1: Soil Characteristics for City of Elma and Vicinity

Table 2: Soil Building Limitations for City of Elma and Vicinity

Geology

The underlying geology of the Elma area consists of sedimentary and volcanic bedrock formed during the Tertiary Period, 25 million years ago. This bedrock is relatively close to the surface north of Strawberry Hill and east of SR 12. Two million years ago during the "Ice Age" of the Pleistocene Epoch, glaciers deposited tremendous quantities of coarse gravel and sand in the Chehalis River Valley known as Quaternary sediments. The depth of Quaternary sediments usually ranges from 80 to 100 feet thick, although some places reach over 200 feet deep. As the "Ice Age" ended, the tremendous flow of the Chehalis River deeply cut through this first layer of glacial deposits, leaving the high terraces with steep sidewalls above the valley floor of today. This meltwater in turn brought new deposits of unweathered sand, gravel, silt, and clay from glaciers elsewhere to create yet another layer of Quaternary sediments.

Topography

Elma covers over 1,000 acres on the valley floor and adjacent terraces of the Lower Chehalis River Valley. The name for this part of the Chehalis River valley is Hunters Prairie.

Along the valley floor, Elma gently loses elevation from east to west. Benchmarks along Main Street show an elevation of 84.6 feet where it crosses the railroad tracks whereby it drops to 43.3 feet at the intersection with 16th Street.

The northern terrace, commonly called Strawberry Hill, begins about one-half mile north of Main Street. This terrace rises abruptly, nearly 200 vertical feet over 500 horizontal feet (40% grade), before the slope begins to flatten. The maximum elevation of the terrace is around 295 feet.

Figure 4: Landslide Hazard Areas Map

Landslide Hazard Areas

The potential for landslides increases under the right soil, topographical, geologic, and moisture conditions. The City of Elma has designated potential landslide areas as

- Soils with slopes 20% or more in grade;
- Soils with severe limitations for shallow excavations; and
- All shorelines of Cloquallum Creek experiencing bank erosion due to river currents.

Figure 4, Potential Landslide Hazard Area, shows areas with soils having slopes 20% or more in grade.

Waterways

Cloquallum Creek is the largest waterway within the city limits. This creek originates in the Mason County foothills northeast of McCleary and drains an area of about 70 square miles. Cloquallum Creek generally flows in a southwesterly direction, joining the Chehalis River due south of Elma at mile 25.2.

The stream channel descends gradually from its headwaters to the mouth. The channel varies from seven to 16 yards in width. Run-off, direct precipitation, lake drainage, and ground water are the contributing water resources for the creek. Several tributaries join the Cloquallum along its course, the largest being Wildcat Creek. The streambed is predominately gravel.

Cloquallum Creek has an average discharge of 274 cubic feet per second (cfs). The maximum-recorded flow was 5,080 cfs in December 1959 and the minimum-recorded flow was 6.8 cfs in September 1945.

Three other lesser creeks travel through the Elma city limits: McDonald Creek, Dry Bed Creek, and Vance Creek. McDonald Creek and Dry Bed Creek are tributaries of Vance Creek and Vance Creek flows into the Chehalis River near mile 21.

Figure 5: Frequently Flooded Areas Map

McDonald Creek drains the area adjacent to Stamper Road, running southwest through Elma before flowing due south to connect with Vance Creek at Vance Creek County Park. The creek flows at about 3 cfs and feeds the three ponds at the former Oakhurst Facility. Dry Bed Creek drains an area of less than 1 square mile north of Highway 12. Approximately 1,000 feet of Dry Bed Creek flows through Elma just west of 18th Street. Vance Creek cuts across the Elma city limits west of Calder Road for about 100 feet.

Frequently Flooded Areas

Cloquallum Creek, McDonald Creek, Vance Creek, and Dry Bed Creek contribute to flooding in Elma. Most of the flooding occurs south of Highways 12 and 8, although Vance Creek and Dry Bed Creek will flood areas west of 18th Street. The Federal Emergency Management Agency (FEMA) Flood Insurance Program designates two areas susceptible to 100-year flood from Cloquallum and McDonald Creeks. FEMA also mapped a 500-year flood boundary for Vance Creek and Dry Bed Creek. The map on the following page shows the location of these floodplains.

During the 100-year flood stage, the Cloquallum increases to about 6,400 cfs. Flooding along Cloquallum Creek during the late 1990's caused severe damage to city water and sewer lines in or near the floodway.

In addition, the following soil-types contribute to occasional or frequent ponding or flooding:

- Chehalis silt loam (30)
- Humptulips silt loam (48)
- Rennie silty clay loam (125)

Wetlands

The City of Elma has adopted the following definition for wetlands:

“Wetlands are areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities. However, wetlands may include those artificial wetlands intentionally created from nonwetland areas created to mitigate conversion of wetlands if permitted by the county or city. RCW 36.70A.030(17).”

National Wetland Inventory (NWI) maps outlines the general location of wetlands within the city limits. Most are palustrine, or freshwater, wetlands such as swamps, bogs, or marshes. Riverine, or stream-associated wetlands lie along Cloquallum Creek. Except for a few, small palustrine wetlands, most of these wetlands are south of Highways 8 and 12.

Another resource for locating potential wetlands is the list of hydric soils in the SCS Soil Survey for Grays Harbor County. Hydric soils support the type of vegetation that is common to wetlands. Hydric soils in Elma include:

- Nemah silty clay loam (91)
- Norma sandy loam (101)
- Rennie silty clay loam (125)

These soils frequently flood during the winter months after periods of heavy rain. Many areas in the city with hydric soils serve pasture, open space, and agriculture activities.

The map on the next page is a composite of the NWI and SCS maps showing potential wetland locations. Disclaimer: neither the National Wetland Inventory nor the SCS Soil Survey Maps are completely reliable sources for identifying where and to what extent wetlands exist in the city. Expert field verification is the only reliable method.

Figure 6: Wetlands Map

Groundwater Aquifers

The Chehalis River Valley has extensive aquifers within its thick alluvial layers of Quaternary sediments. These coarse gravel and sand deposits yield substantial quantities of groundwater relatively close to the surface of the earth. The Chehalis River is a major contributor to this source for groundwater. On the other hand, the hills north and east of the city consisting of Tertiary bedrock provide little to no groundwater resources.

Wells in the area obtain groundwater from two distinct aquifer layers. The upper aquifer is generally about 100 feet deep and supplies adequate water quantity, although it is quite high in iron content. Treatment is normally required for using this source as drinking water. The lower aquifer is typically deeper than 100 feet and supplies large quantities of groundwater of excellent quality. The city water system wells extend to the upper reaches of this lower aquifer. Yields from these aquifers can range from 200 to 3,000 gpm. Historic well logs and pump tests in the area show that withdrawals from the aquifer at a rate of 50 gpm or more result in minimal draw down.

Despite the Chehalis River being the major recharge source for the valley aquifers, surface percolation is equally important. Stormwater, along with any contaminants, slowly penetrates the soils, sand, and gravel to enter the aquifer. The process can be even more direct in areas with wetlands. Consequently, activities above the aquifer can greatly influence groundwater quality and impact drinking water supplies. More discussion regarding wellhead protection follows under the public facilities section.

The city prepared a wellhead protection plan that delineated critical aquifer recharge area capture zones using the calculated fixed radius (CFR) method. These capture zones include one and five year zones. These zones show how long a particle of water travels within the aquifer before be pumped by a well. A map showing the capture zones for each city well follows on the next page.

Figure 7: Wellhead Capture Zones

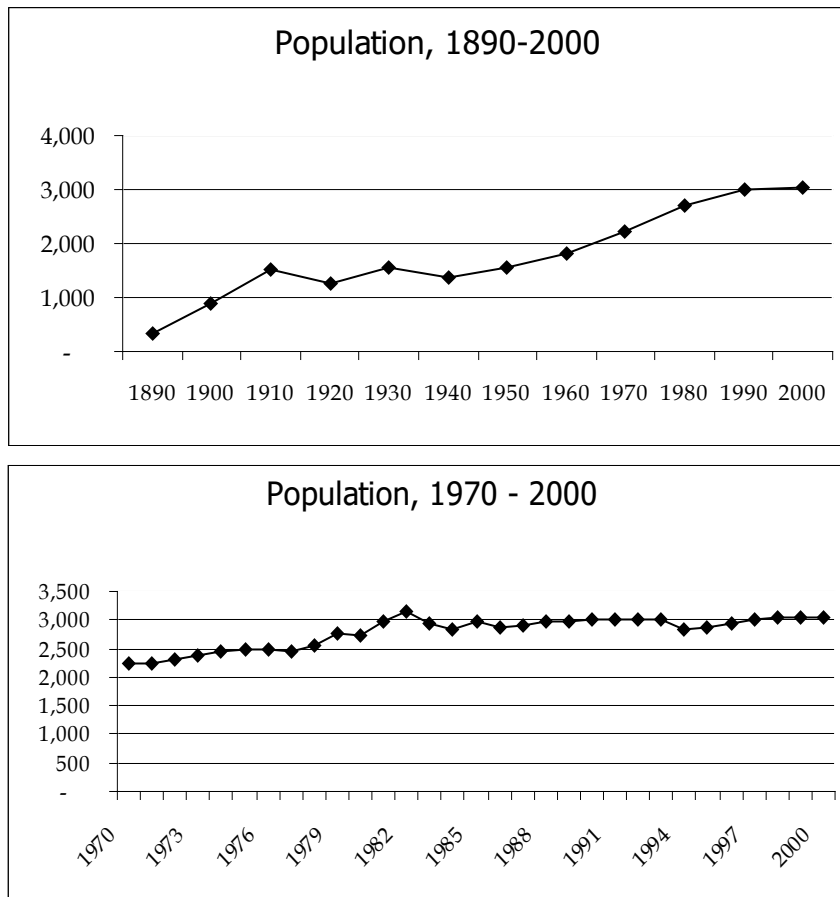
Section B: The Human Environment

Population Trends

Historical Trends

The City of Elma incorporated in 1888 and ranks as the second oldest city in Grays Harbor County. The first census in Elma recorded a population of 345. Today, the 2000 US Census counted the population at 3,049. Except for occasional dips, the population steadily grew until the 1990's when growth slowed.

Figure 8: Population of City of Elma, 1890 through 2000 and 1970 through 2000

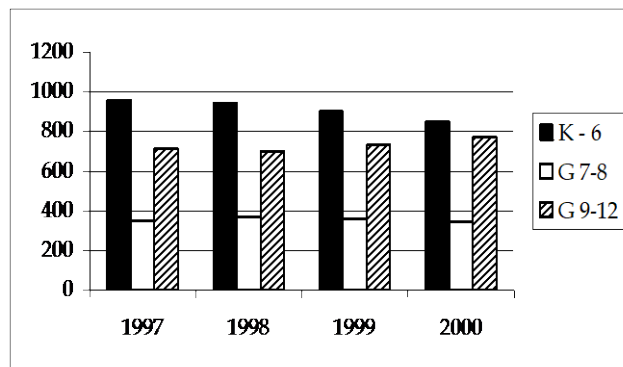


The population of the city has increased an average of 246 people for every decade between the years 1890 through 2000. Since 1970, the average annual growth rate was 1.15%. Between 1990 and 2000, however, the average annual growth rate has been a more modest 0.15%. This lesser growth rate reflects the erratic losses and gains occurring during this past decade.

A comparison of Elma’s population with the county from 1968 to 2000 reveals that Elma’s population averaged 4.3% of the county’s total population.

Records for school full-time enrollment show a very gradual decline for Grades K–6 between the school years ending 1997 through 2000. The upper grades, which include students from McCleary, show a steady or slightly increasing pattern during this same time.

Figure 9: Student Enrollment in Elma School District, 1997 through 2000



Employment Trends and Population Growth

A factor influencing population growth is area employment. After experiencing significant declines in timber industry jobs, Grays Harbor County is seeing some job creation at the Satsop Public Development Authority (PDA). This quasi-municipal development agency, located about five miles south of Satsop, is the site of the former Washington Public Power Supply nuclear power plant. There are 440 acres available for business and industrial development. As of July 2001, the PDA has been successful in recruiting a number of small to large firms to the site. Currently, eight firms employ 326 people. With continued growth of Safeharbor.com and the proposed opening of Boise Cascade, Duke Energy, and

Simpson Door plants, the number of employees on site could grow to near 950 by the year 2006.

The Planning Commission estimates as many as 190, or 20%, of the eventual total workforce at the PDA site will likely reside within the city limits or in the proposed urban growth area. Assuming 10% of these workers already will be Elma residents, the city and adjacent areas could gain as many as 170 new workers. Using the 2.48 person per household statistic as a multiplier, these new workers could add as many as 420 more people within the city/urban growth area.

Existing Area Population

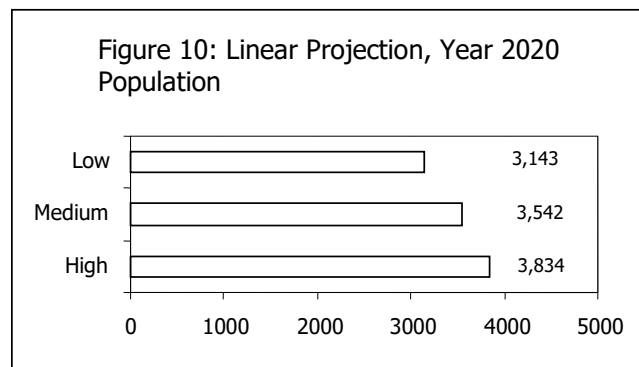
There are approximately 897 households in a two-mile radius around the city limits, according to the records of the Grays Harbor County Assessor. Multiplying the median number of persons per household in Grays Harbor County, 2.48, against the number of these surrounding households renders an estimated population of 2,225 people.

20-Year Population Projection Scenarios

Population projections involve reviewing past trends and using them to make reasonable estimates for the future. Projections, however, are quite susceptible to sudden changes in a community that are often hard to predict. This is especially true in relation to the health of local and regional economies.

The information below includes several 20-year population projections based on linear methods.

1. If Elma continues to increase by 246 people every decade, the 2020 population estimate for the community would be **3,542**. This is 16.1% increase over the 2000 OFM population estimate.



2. If Elma continues to grow at an average annual rate of 1.15%, the 2020 population will be **3,834**. This is a 25.7% increase over the 2000 OFM population estimate.
3. If Elma continues to grow at an average annual rate of 0.15%, the 2020 population will be **3,143**. This is a 3.0% increase over the 2000 OFM population estimate.

The Office of Financial Management (OFM) in 1995 prepared a series of 20-year population projections for each county in the state as required under the Growth Management Act. These are complex calculation based on a variety of factors such as birth and death rates, net migration rates, and economic forecasts. The OFM produced a high, medium, and low forecast for each county. While these OFM estimates sometimes underestimated growth for some counties in Western Washington, the opposite was true for Grays Harbor County. Grays Harbor County actually failed to reach the estimated high, medium, or low projections for the year 2000. The most recent 2000 OFM estimate for the county is 67,100, which is nearly 3,500 less than even the lowest growth management estimate.

However, the growth management estimates are useful in developing a 20-year proportional projection for Elma. This approach takes each five-year high, medium, and low estimate for Grays Harbor County and then multiplies against each the historic average proportion of Elma’s population in the county, which is 4.3%. The results are as follows in the table below:

Table 3: OFM High, Medium, and Low Population Projection Series

Projection	2000	2005	2010	2015	2020
High Series:					
• Grays Harbor County	73,578	77,516	82,512	89,110	97,231
• Elma	3,156	3,325	3,540	3,823	4,171
Medium Series:					
• Grays Harbor County	71,848	73,905	76,821	81,010	86,309
• Elma	3,082	3,171	3,296	3,475	3,703
Low Series:					
• Grays Harbor County	70,554	71,272	72,752	75,338	78,822
• Elma	3,027	3,058	3,121	3,232	3,381

Selected Population Projection

The Planning Commission anticipates growth in Elma over the next twenty years will occur through a combination of natural increase, in-migration of new residents (retirees and new workers at the PDA site), and annexations of current and future properties in the county. As a result, the Planning Commission assumes that the population in Elma in 2021 will increase by 1,180 people, rising to a total population of 5,000.

Population Demographics

Early releases of the 2000 US Census provides the most recent demographic information specific to Elma. The US Census Bureau intends to release additional information, such as income and employment statistics, by census tract and block later in 2001 and 2002. The tables below present data about Elma's population concerning sex, age, race, and household types.

Table 4: Residents by Sex, 2000 US Census

Sex	Number	Percent
Male	1,503	49.3
Female	1,546	50.7

Table 5: Residents by Age, 2000 US Census

Age	Number	Percent
Under 5 years	210	6.7
5 to 19 years	780	25.5
20 to 44 years	1,033	33.9
45 to 64 years	588	19.4
65 years and over	438	14.4
Median age	33.9	--

Table 6: Residents by Race, 2000 US Census

Race	Number	Percent
Total population	3,049	100.0
One race	2,929	96.1
• White	2,774	91.0
• Black or African American	18	0.6
• Asian	39	1.3
• Native Hawaiian or other Pacific Islander	8	0.3
• Some other race	50	1.6
Two or more races	120	3.9
Hispanic of any race	111	3.6

Table 7: Households by Type, 2000 US Census

Household by Type	Number	Percent
Total households	1,195	100.0
Family households	765	64.0
• With own children under 18 years	424	35.5
Married-couple family households	537	44.9
• With own children under 18 years	250	20.9
Female householder, no husband present	162	13.2
• With children under 18 years	127	10.6
Non-family households	430	36.0
• Householder living alone	329	27.5
• Householder 65 years and over	147	12.3
Households with individuals under 18 years	468	39.2
Households with individuals 65 years & over	319	26.7
Average household size	2.51	--
Average family size	3.06	--

Land Uses

The City of Elma has a variety of land uses that fall under eight general categories: residential; commercial; industrial; public buildings and facilities; cultural, recreational, and religious; utilities and transportation; non-urban and vacant; and public rights-of-ways.

Residential land uses cover 30.7% of the total land area in the city, making it the largest land use activity. Residential uses include single-family homes, manufactured (mobile) homes, duplexes, and apartments with three or more units. The city has 329 acres of residential land uses, 81% of which is single-family homes. Manufactured home parks make up the next largest residential group followed by

multi family units with two or more homes. The median lot size for single-family homes is 0.21 acre, or almost 9,150 square feet.

Commercial areas include a wide range of activities, from retail trades to professional services. Commercial areas make up nearly 14% of the city's total land area. Most of these activities are within the downtown core, although there some businesses are scattered within neighborhoods south of Strawberry Hill.

Industrial areas include manufacturing with and without buildings. These lands comprise 12.2% of the total land area, or 131 acres. The larger industrial parcels in the city lie south of State Route 12 and 8, well away from the majority of Elma's neighborhoods.

Land with public facilities owned by the city, county, and school district cover nearly 63 acres or 5.8% of the city. Cultural, recreational, and religious activities take up a much smaller 6.6 acres.

Utilities and transportation activities include areas devoted to providing electrical and gas utilities, as well as buildings and land used for transportation purposes. Less than four acres are devoted to utilities and transportation.

An important category for future development is non-urban and vacant lands. Lands in this category include bare platted properties, agriculture land, undeveloped land, and timberland under the Open Space (RCW 84.34). Many of these properties are capable of accommodating development at greater urban densities. Currently, 13.2% of the city, or 142 acres, fall under this category.

Finally, city, state, and railroad rights-of-way, whether developed or undeveloped, account for 23.3%, or 250 acres, of the city's total area.

Table 8: Land Uses by Acres, Total Acres, and Percent of Total City Acres, 2000 Grays Harbor County Assessor Records.

Land Use	Acres	Total Acres	Percent
Residential		328.62	30.7%
- Single Family (11)	266.29		
- Multi 2-4 units (12)	10.77		
- Multi 5 or more units (13)	18.52		
- Manufactured Home Parks (15)	30.58		
- Institutional (17)	2.46		
Commercial		147.54	13.8%
- Hotel/motel (16)	0.63		
- Commercial (50)	87.21		
- Retail Trade (52-59)	17.49		
- Finance, Insur. & RE (61)	2.3		
- Personal Services (62)	0.68		
- Business Services (63)	0.32		
- Repair Services (64)	4.81		
- Professional Services (65)	2.28		
- Commercial with SF Residence (60)	19.19		
- Misc. Services (69 partial - other)	12.63		
Public Facilities		62.54	5.8%
- Governmental Services (67)	4.84		
- Educational Services (68)	2.03		
- Misc. Services (69 partial - government)	55.67		
Cultural, Recreational, Religious		6.65	0.6%
- Public Assembly/Church (72)	2.29		
- Amusement (73)	0.17		
- Lodges (79)	0.89		
- Misc Services (69 partial - churches)	3.3		
Non Urban, Vacant		141.39	13.2%
- Bare land platted (18)	132.28		
- Agriculture (81)	4.5		
- Undeveloped land (91)	3.25		
- Timberland/RCW 84.34	1.36		
Utilities & Transportation		3.97	0.4%
- Parking lots (46)	1.86		
- Utilities (48)	2.02		
- ROW (45)	0.09		
Industrial		131.23	12.2%
- Food & Kindred Products (21)	27.28		
- Lumber/Wood products (24)	6.27		
- Petroleum Refining & related (29)	0.21		
- Industrial land (36)	68.25		
- Industrial land with buildings (37)	29.22		
TOTAL		821.94	76.7%
Total Acres within city limits		1,071.63	
Difference (ROW)		249.69	23.3%

Housing

Housing Types

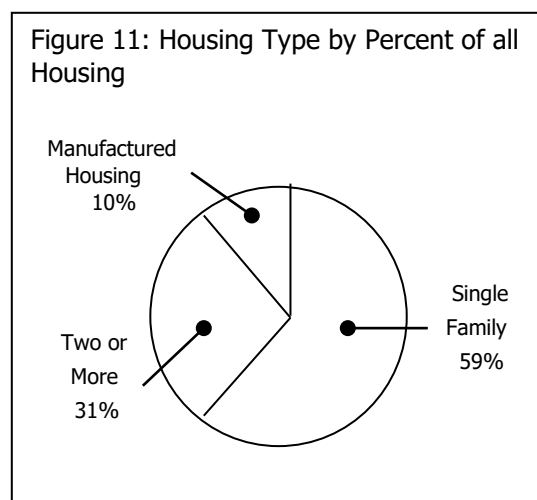
According to 1999 statistics from the Office of Financial Management, there are 1,289 housing units in the City of Elma. Since 1990, the greatest growth in housing has occurred with manufactured homes.

Table 9: Housing by Structure Type, Year, and Percent Increase

Structure Type	1990	1999	1990-1999 Increase
One-Unit	724	760	4.7%
Two or More Units	394	396	0.5%
Manufactured Homes/Trailers	92	133	30.8%
Total Units	1,210	1,289	6.1%

Single-family homes are the largest type of housing in Elma. Although manufactured homes continue to grow in number, they remain the third largest housing category.

The Grays Harbor County Assessor records report that 1954 is the median year for residential construction. The 1990 US Census shows that 29.4% of all homes were constructed in 1939 or earlier. The median square footage for residences is 1,359 feet. The median single-family assessed value (structure only) is \$52,880.



Another source of information about housing in Elma is from the new 2000 US Census. Early data releases show information about housing occupancy and tenure.

Table 10: Housing Occupancy and Tenure, 2000 US Census

Housing Occupancy & Tenure	Number	Percent
Total housing units	1,330	100.0
Occupied housing units	1,195	89.8
Vacant housing units	135	10.2
• Homeowner vacancy rate	--	3.4
• Renter occupied vacancy rate	--	7.4
Homeowner housing units	657	55.0
Renter housing units	538	45.0
Average household size for owner-occupied units	2.61	--
Average household size for renter-occupied units	2.40	--

Housing Conditions

A housing survey conducted in 1995 for a Grays Harbor County Community Development and Housing Plan assessed housing conditions in Census Tracts 5.1, 5.3, 5.2, and 5.5. The survey found a significant number of homes with one or more deficiencies with its roof, foundation, windows, and exterior walls. The total cost of repair in 1995 was \$1.6 million. The following table summarizes results of the study:

Table 11: Exterior Housing Conditions by Census Tracts Surveyed

Census Tract 5.1,3,4,5					Units: 537
Condition	Roof	Foundation	Windows	Ext. Walls	Total
Slight	110	89	230	129	
Significant	55	23	46	52	
Critical	21	10	9	15	
Good	351	415	252	341	
Total Costs	\$ 201,500	\$ 147,300	\$ 685,200	\$ 517,300	\$ 1,551,300
Total Units with 1 or more Deficiencies:			362	67.4%	
Low- and Moderate-Income Households:			450	60.8%	

Public Facilities and Services

Water System

The City of Elma owns and operates a Group A municipal water system. The system inventory includes four wells, a booster pump, four reservoirs, and 24 miles of distribution lines. The system currently provides 510,000 gallons of water daily to 1,380 connections within and outside the city limits.

The city's Water Service Area covers 4,380 acres, an area that includes 3,000 acres of unincorporated lands primarily north and west of the city limits. At the present, the system serves customers over a 1,540-acre area.

Two wells supply Elma's water system. Well No. 4, known as Cemetery Well, is the principle supply source for the system. Drilled in 1978, the well is 102 feet deep and has water rights to withdrawal up to 1,000 gallons per minute (gpm) and a maximum volume of 672 acre-feet per year. The 75-hp pump can supply the system with up to 900 gpm. The location of the well is about one-half mile west of the city limits south of the Monte-Elma Road.

Well No. 3, known as McCools Well, is the city's auxiliary well that supplies the system during its peak demand periods. It can supply up to 700 gpm. The city drilled the well in 1960 and it has a depth of 100 feet. Water rights for the well allow up to 750 gpm and a maximum withdrawal of 560 acre-feet annually. McCools Well is on a one-acre parcel outside the city limits at the end of Bailey Road.

The city owns two other wells, Wells No. 1 and 2, commonly called the Upper and Lower Bayview Wells. These wells date back to when the city first installed the system in 1912. The city maintains the wells as an emergency back-up water supply source and currently is not in use. Each well is relatively shallow, 38 and 46 feet deep respectively, and are 50 feet apart. Both wells lie within 500 feet of gravel pits that have varying depths of 30 to 60 feet. The close proximity of the pits potentially creates a contamination source and the current Water System Plan recommends

Figure 12: Water System Map

abandoning the wells. The wells are on a 1½-acre parcel southwest of the Elma city limits in the 100-year flood plain.

Total water rights for the city allows a maximum withdrawal of 1,000 gpm and 672 acre-feet (219 million gallons) annually from its four wells. To meet its 2015 projections, the city will need to increase its water rights for its existing wells. The Water System Plan predicts that the city will need a 1,500-gpm-withdrawal rate and a maximum volume of 863 acre-feet annually. The Department of Ecology is currently evaluating the city's application.

The distribution system consists of approximately 24 miles of 4", 6", 8", 10", and 12" lines. The majority of the lines are 6" and 8" asbestos concrete, while the larger diameter lines are made of ductile and cast iron. The system needs to replace its 2" and 4" lines with larger diameter lines to meet minimum fire flow standards. Because the lines serving the Fairgrounds and the Rohn & Haas plant are long and non-looped, these areas are vulnerable to potential service interruptions.

Four steel reservoirs provide the water system with a total storage capacity of 1.5 million gallons. Three reservoirs serve the lower central zone. This includes two 500,000-gallon reservoirs at the north end of 3rd Street and a 300,000-gallon reservoir at the Rohn & Haas plant. The Rohn & Haas reservoir reserves 200,000 gallons of its total capacity strictly for fire protection at the plant. A single 200,000-gallon reservoir at the north end of Boley Road serves the upper pressure zone. The reservoir serves the needs of approximately 50 connections in the Strawberry Hill area. The 11th Street booster pump maintains water levels at the Boley Reservoir.

The city has sufficient storage capacity to meet existing and future needs of the system.

Wastewater System

The City of Elma operates a wastewater collection and treatment system serving approximately 700 connections within the city limits. The system consists of 11 miles of collection lines, four lift stations, and an aerated treatment lagoon.

The service area for the system covers approximately 1,430 acres, which includes all areas within the city and unincorporated areas to the north and west. Currently, the city serves 700 connections over 500 acres of the total service area.

Eleven miles of collection lines transfer wastewater from nine interconnected drainage basins to the treatment lagoon. Because of the topography, five basins collect wastewater by gravity to a central point while four others must do so through lift stations. Eventually, all sewage collects into a 10" gravity line along Waldrip Street before entering the treatment lagoon. Lines in the collection system vary in size from a limited number of 2" lines to large 12" main trunk lines. Elma currently is undergoing a line replacement program to replace and/or repair old, leaky lines. This project will reduce the amount of groundwater flowing into cracked or broken lines, which will increase the capacity of the treatment facility and cut its operation costs.

The city currently relies on an aerated facultative lagoon system with a clarifier to treat its wastewater. A pump lifts the wastewater into one of two lagoons in the system that holds 2.6 million gallons each. After the wastewater undergoes appropriate treatment, the plant pumps the effluent into a 10,000-foot line that empties into the Chehalis River. The city built the current treatment system in 1975. The city must operate the plant through a Waste Discharge Permit under the National Pollutant Discharge Elimination System (NPDES). This current NPDES Permit establishes standards regarding the quality of the effluent the treatment facility discharges into the Chehalis River. These standards cover the volume of the discharge, biochemical oxygen demand (BOD), total suspended solids, fecal coliform, and pH. It is likely that these standards eventually will become more stringent to protect fish runs in the Chehalis.

Figure 13: Sewer System Map

The city occasionally experiences trouble meeting some of these standards because of excessive flows entering the treatment system. Contributing factors to these excessive flows are groundwater and stormwater entering the collection system as well increased growth-related wastewater.

Because of age and capacity issues, the city will be making a number of significant improvements to the treatment system that will assure meeting the NPDES Permit requirements at a cost of \$5.3 million. With these improvements, the treatment system will be capable of accommodating 20% more growth, or a monthly average of 1.05 million gallons per day. This would serve an equivalent population size of 5,000 people. However, the volume of groundwater and stormwater entering the collection lines, along with any large industrial flows, limits the actual population size that the treatment facility can actually serve.

Stormwater Management

The City of Elma currently has a limited system for managing stormwater in the downtown and about a quarter of its neighborhoods. There is 6½ miles of underground piping along portions of Martin, East Waldrip, Main, Young, and Anderson Streets. The 1½ miles of open ditches lie along West Pine, West Wakefield, and N. 13th Streets. Both the underground piping and open ditch systems drain waters into streams and other natural drainage areas. The Puget Sound and Pacific Railroad maintains its own drainage system next to its right-of-way.

The city's system generally minimizes accumulations in those areas it currently serves. However, preliminary engineering analysis indicates that much of the underground system is undersized and needs work. The open ditches appear to have greater capacity. Areas in the city where the system does not cover do experience temporary standing water during period of heavy rainfall. Minor localized flooding from stormwater accumulations typically occur along 11th, Main, and 18th Streets, as well as the area at the foot of 6th Street.

Other than upgrading underground lines during street projects, the city does not have a specific plan for a citywide stormwater management at this time. However, it has adopted a stormwater management level of service that allows limited flooding of yards and streets during 25-year storm events.

Transportation

Surface transportation systems in Elma include state highways, city streets, sidewalks, and railways. A private airport lies southwest beyond the city limits and the city

State Highways

Elma is a major crossroads for State Route (SR) 8 joining with SR 12. WSDOT classifies both highways as principal arterials. They serve as vital commercial and tourism routes linking the Interstate 5 corridor with coastal destinations.

SR 8 is a short 21-mile link joining SR 101 west of Olympia with SR 12. Washington State Department of Transportation (WSDOT) Average Daily Traffic (ADT) counts for SR 8 in 1998 reported 14,000 vehicles after the ramp for SR 12. SR 12 is a 434-mile highway that begins in Aberdeen and ends at the Idaho border in Clarkston. ADT counts for SR 12 at Schouweiler Road shows 20,000 vehicles; however, this volume drops dramatically to 6,200 vehicles after its junction with SR 8.

City Streets

The City of Elma has 17.2 miles of streets and 5 miles of alleys. The street pattern on the flats below Strawberry Hill and north of SR 12 and SR 8 is a classic north-south/east-west grid pattern. On Strawberry Hill, the street patterns are less set, being a mix of dead-end branches and loops. Older right-of-way widths generally are 66 feet wide while newer ones range from 40 to 55 feet.

Elma has 12 designated arterials recognized under the Transportation Improvement Board (TIB) Program. Arterials are streets that:

- Serve as the logical extension of a county arterial into the corporate boundary; or
- Serve as route connecting local generators such as schools, medical facilities, social centers, recreational areas, commercial centers, or industrial sites within the corporate boundary; or
- Act as a bypass or truck route to relieve the central core area from excessive traffic.

Table 12: List of City Arterials

Arterial	Section
11 th Street	Main to Wakefield Streets
12 th Street	Wakefield Street to Harding Road
2 nd Street	Main to Pine Streets
3 rd Street	City limits to Mill Street
5 th Street	South end to Main Street
Harding Road	12 th to Garden Hill Road
Main Street	West to east city limits
Pine Street	East city limits to 3 rd Street
SR 12/Old Highway	Main Street to the south city limits
Wakefield Street	11 th to 12 th Streets
Waldrip Street	B/3 rd to Main Streets
Young Street	A to 17 th Streets

Streets in Elma are mostly asphalt and in generally good condition. There are two concrete streets in the city, which include a 0.45-mile section of Young Street and a 0.25-mile stretch of Main Street.

Alleys are common in the city’s older plats and predominately have a gravel surface. The total length of alleys is five miles. The city periodically maintains the alleys and has a goal of paving about 600 feet annually.

There are about 3.5 miles of sidewalks in Elma. They lie along the main east-west streets, including Waldrip, Main, Young, Anderson, and Martin. The only north-south streets with sidewalks are 2nd and 3rd Streets.

Two city-owned bridges span the Puget Sound and Pacific Railroad tracks. The Main Street Viaduct, built in 1940, is in good condition. The Young Street Viaduct is over 80 years old and received some refurbishing in 1992. The bridge,

inspected by WSDOT every two years, is in poor condition and has a 15 ton weight limit.

The city has a single traffic light located at the intersection of 3rd and Main Streets and is in good condition.

The city has adopted a "B" Level of Service Standard for streets in Elma. This standard requires "...reasonably unimpeded operations with average travel speeds usually about 70 percent of the posted speed limit. Stopped delays at signalized intersections are not bothersome. Drivers are not generally subjected to appreciable tension."

Railways

Nearly 3½ miles of rail line lie within the Elma city limits. The Puget Sound and Pacific Railroad Company owns and maintains two lines for a short-line regional railroad. The east-west line begins in Hoquiam and ends in Shelton where it connects with a line owned by the US Navy serving the Bremerton and Bangor Naval Facilities. The north-south line travels south from the Elma interchange and connects to the main Burlington North Santa Fe line at Centralia. The Puget Sound and Pacific Railroad Company keeps its headquarters in Elma. A subsidiary of ParkSierra Rail Group from Napa, California, the company started in 1997 after purchasing the line from Burlington Northern Santa Fe Railway.

The typical Grays Harbor train consists of 20-30 cars pulled by two GP10 locomotives. Common freight loads include lumber on center-beam flat cars, logs on modified bulkhead flat cars, boxcars, and covered hoppers. The train running to Bangor is normally slightly longer than the Grays Harbor train. Train operations typically occur Monday through Friday during day and evening hours.

Airport

Immediately south of the city limits lies the Elma Municipal Airport, a privately owned facility. The airfield has a lighted 2,275 by 30-foot asphalt runway and a parallel 1,700-foot turf runway. There is a lighted windsock and rotating beacon.

Hangers are available for storing privately owned aircraft. Air traffic is light and no commercial air service operates from the airport.

Public Utilities

Electricity

The Grays Harbor Public Utility District (PUD) is the electrical supplier for the City of Elma and the surrounding area. The PUD operates a 50-megawatt substation in Elma and has main electrical lines offering 7-kilovolt (1 phase) and 12-kilovolt (1, 2, and 3 phase) services. The majority of lines are aboveground. Current peak demand from the substation is 13 megawatts, well below the capacity of the substation.

The PUD has no major facility improvements slated for the planning area in the near future. The capacity of the existing electrical infrastructure will satisfy current growth levels over the next 10 to 20 years. However, the PUD will continue making routine improvements, such as upgrading existing lines and extending feeder lines as growth occurs.

Natural Gas

Cascade Natural Gas distributes natural gas to homes and businesses through much of Elma south of Strawberry Hill. Cascade Natural Gas delivers its product in Grays Harbor County via an eight-inch main line that terminates in Aberdeen and Hoquiam. Hook-ups to the system are on a case-by-case basis; a complex rate structure based on anticipated usage governs whether extensions are free or paid by a property owner.

The company expects the capacity of its main line to satisfy any future growth in the county over the next 20 years. Thus, Cascade Natural gas has no major improvements to the system scheduled at this time.

Telecommunications

CenturyTel, a Louisiana-based company, is the telecommunications utility provider in the City of Elma. Before 1998, Pacific Telecom, Inc. (PTI) was the telecommunications provider to the area. CenturyTel's services include telephone and internet access to the community.

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