




City of Hoquiam
Comprehensive Land Use Plan


Hometown
Hoquiam
2028

February 2009

**City of Hoquiam
Comprehensive Land Use Plan**

City of Hoquiam Planning Commission:

Jennifer Winkelman, Chair
Bob Esposito
David Murnen
Denise Burke

Linda Hurd
Mervin Beyer
Nancy Taylor

City Council:

Ben Winkelman
Byron Hyde
Carla Streifel
Darrin Moir
Greg Grun
Jasmine Dickhoff

John Pellegrini
Kyla Houchens
Paul McMillan
Rick Haugen
Sandi Grimnes

Mayor:

Jack Durney

City Officials:

Brian Shay, City Administrator
Alissa Thurman, City Planner

Prepared by

John M. Kliem & Deborah A. Holden
Creative Community Solutions
www.ccsolympia.com

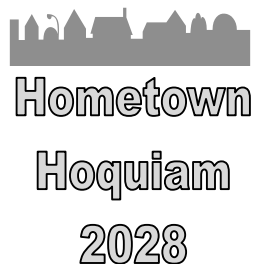


Table of Contents

Introduction.....	1
Section One: Vision – Development Strategies – Land Use Steps.....	4
1.0 Development Strategies for Future Residential Uses	6
Development Strategy 1.1: Residential Districts	6
Development Strategy 1.2: Future Residential District	8
Development Strategy 1.3: Other Land Uses in Residential Districts	9
2.0 Development Strategies for Future Commercial Uses	10
Development Strategy 2.1: Commercial Districts.....	10
Development Strategy 2.2: Expansion of Commercial District.....	11
Development Strategy 2.3: Simpson/Sumner Corridor	12
Development Strategy 2.4: Downtown Focus	13
Development Strategy 2.5: Office & Technology Parks	14
3.0 Development Strategies for Future Industrial Uses	15
Development Strategy 3.1: Industrial District	15
Development Strategy 3.2: Heavy Commercial/Light Industrial District	17
Development Strategy 3.3: Industrial Development & Infrastructure	18
4.0 Development Strategies for Natural Resource Production Lands	18
Development Strategy 4.1: Natural Resource Production District	18
5.0 Development Strategies for Planned Unit/Mixed-Use Developments.....	20
Development Strategy 5.1: Planned Unit/Mixed-Use Development District	20
6.0 Development Strategies for Managing Environmental Assets and Constraints	22
Development Strategy 6.1: Wetlands.....	22
Development Strategy 6.2: Geologically Hazardous Areas.....	24

Development Strategy 6.3: Fish & Wildlife Habitat Conservation Areas.....	25
Development Strategy 6.4: Frequently Flooded Areas.....	27
Development Strategy 6.5: Surface Waters	28
7.0 Development Strategies for Homes and Neighborhoods.....	30
Development Strategy 7.1: Housing of Choice	30
Development Strategy 7.2: Improving Neighborhood Infrastructure	31
Development Strategy 7.3: Improving Neighborhood Appearance	32
Development Strategy 7.4: Housing Rehabilitation	33
8.0 Development Strategies for Transportation Systems	35
Development Strategy 8.1: Balanced Transportation System.....	35
Development Strategy 8.2: Transportation Improvements	36
Development Strategy 8.3: Design Standards and Amenities	38
Development Strategy 8.4: Funding Transportation	39
9.0 Development Strategies for Public Facilities and Services	41
Development Strategy 9.1: Meeting Future Demands.....	41
Development Strategy 9.2: New Development	42
Development Strategy 9.3: Funding Public Facilities and Services.....	43
Development Strategy 9.4: Emergency Planning	44
Development Strategy 9.5: Siting Public Facilities.....	45
10.0 Development Strategies for Utilities	46
Development Strategy 10.1: Cooperative Planning.....	46
11.0 Development Strategies for Parks and Open Space.....	48
Development Strategy 11.1: Parks for Everyone.....	48
Development Strategy 11.2: Managing Open Spaces	49
12.0 Development Strategies for Economic Development	50
Development Strategy 12.1: Framework for Economic Development Planning	50
Development Strategy 12.2: Managing the Development Review Process	51

Section Two: Background Information.....	52
1.0 Location	53
1.1 Climate.....	53
1.2 Geology.....	55
1.3 Topography.....	56
1.4 Soils	57
1.5 Waterways.....	62
1.6 Fish and Wildlife	70
2.0 Classification and Designation of Critical Areas	71
2.1 Wetlands.....	72
2.2 Areas with a critical recharging effect on aquifers for potable water	72
2.3 Frequently Flooded Areas	73
2.4 Geologically Hazardous Areas	77
3.1 Historical Development.....	82
3.2 Historic Population Trends.....	83
3.3 Future Population Projections.....	84
3.4 Community Demographics.....	86

3.5 Existing Land Uses	91
3.6 Transportation and Circulation	93
3.7 Public Services and Facilities	111
3.8 Housing	125
3.9 Parks and Recreation Facilities	131
Glossary	134
Bibliography	147

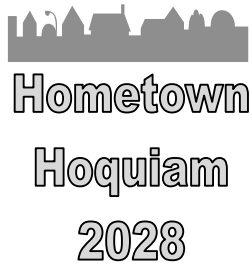
FIGURES:

Figure 1 Future Land Use Map	7
Figure 2 Topography	56
Figure 3 Soils Type Locations	59
Figure 4 City Of Hoquiam Flood Zone	63
Figure 5 City Of Hoquiam Wetlands	68
Figure 6 100-Year Floodplain	75
Figure 7 Tsunami Hazard Zone	76
Figure 8 Liquefaction Zones	80
Figure 9 Susceptibility To Earthquake Damage By Site Class Zones	81
Figure 10 Hoquiam Population,1890 – 2000	84
Figure 11 City Streets And State Highways	95
Figure 12 Hoquiam-Aberdeen Ghta Routes	108
Figure 13 Residential Land Uses	123

TABLES:

Table 1 Monthly Totals and Averages, Hoquiam Bowerman Station, Years 1971 – 2000	54
Table 2 Highest Daily Precipitation Events, Hoquiam Bowerman Station, Years 1953-2007	55

Table 3	Soil Types by Acres and Percent Of Total Acres	57
Table 4	Soil Characteristics for the City Of Hoquiam	60
Table 5	Building Site Development Characteristics	61
Table 6	Flooding Recurrence Intervals & Heights	74
Table 7	Future Population Estimates for Grays Harbor County & City of Hoquiam, 2000 - 2025	86
Table 8	Age Groups: Number & Percent Of All People, 2000 Us Census	87
Table 9	Race: Number & Percent of all People, 2000 Us Census	87
Table 10	Household Type: Number & Percent of Total Households, 2000 Us Census	88
Table 11	Household Size: Number & Percent of All Households, 2000 Us Census	89
Table 12	Income: Number of Total, Family & Non-Family Households, 2000 Us Census	90
Table 13	Land Uses in the City Of Hoquiam, Grays Harbor County Assessor, 2007	92
Table 14	Average Daily Traffic Volumes for Sr 101, 2003-2006	96
Table 15	Average Daily Traffic Volumes for Sr 109, 2003-2006	97
Table 16	Average Daily Traffic Volumes for Sr 109 Spur, 2003-2006	97
Table 17	Six-Year Transportation Improvement Program, 2008-2013 by Priority	101
Table 18	Stormwater Collection Improvement Plan	114
Table 19	Collection System By Area, Pipe Size and Length	120
Table 20	Hoquiam School District Enrollments, 2003 - 2006	124
Table 21	Capacity of School Facilities, Hoquiam School District	125
Table 22	Residential Parcels, Total Acres, & Median Lot Size, Grays Harbor County Assessor (2007)	129
Table 23	Summary of Projected Housing Needed by 2025	130
Table 24	Inventory of Recreation Sites Within the City Of Hoquiam	132



Purpose of the Plan

The City of Hoquiam Comprehensive Land Use Plan guides the future physical development of the community over the next 20 years. It is a framework of official policies agreed upon by citizens, government, business, and industry to coordinate public and private investment within the community. The Comprehensive Land Use Plan also provides the foundation for the city's development regulations pertaining to zoning, subdivision of land, critical areas protection, and other city ordinances.

The plan consists of an overall vision for Hoquiam's future as well as a series of specific goals, objectives, and action steps for eight key elements:

- Future Land Use
- Environmental Management
- Housing
- Transportation
- Public Facilities and Services
- Utilities
- Open Space and Parks
- Economic Development

None of these elements stand alone; each one interconnects with the other elements.

It is also important to note that the Comprehensive Land Use Plan works in conjunction with other adopted city plans serving important specialized functions and needs of the community. Currently, these functional plans include:

- Capital Facilities Plan
- Water System Plan (2003 Update)
- Comprehensive Surface Water Management Plan
- Parks and Recreation Plan
- Six-Year Transportation Improvement Program
- Hometown Hoquiam (July 2005)

- Hometown Hoquiam Phase 2: Economic Development Strategic Action Plan: 2008-2012
- Grays Harbor County Comprehensive Solid Waste Management Plan

The Comprehensive Land Use Plan, however, takes precedence over these other plans, especially as they affect future land uses in the city. This requirement assures coordinated and consistent future development.

In addition to reflecting community needs and desires, this comprehensive plan conforms to Washington State law. The plan satisfies the legal requirements for Planning and Zoning in Code Cities, [Chapter 35A.63](#) of the Revised Code of Washington (RCW) and those sections of the Growth Management Act, [Chapter 36.70A RCW](#), that apply to those counties not planning under the act.¹ The plan also provides substantive authority for Threshold Decisions made under the State Environmental Policy Act as provide under the [Washington Administrative Code \(WAC\) 197-11-060](#).

Plan Organization

The organization of the Comprehensive Land Use Plan is simple to make it easy to use by the community and city officials. There are two sections to the plan.

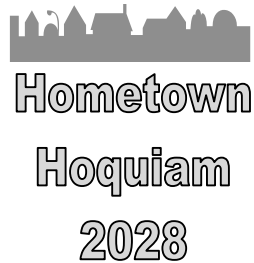
Section One is the focal point of the plan. It sets a 20-year vision for the future of Hoquiam and lists a series of development strategies and land use action steps for accomplishing that vision.

¹ See [RCW 36.70A.170](#) and [RCW 36.70A.060\(2\)](#)

- The **vision** is a statement by the community describing its hopes and aspirations for the future of Hoquiam. It channels citizen values and efforts towards a practical outcome.
- **Development strategies** point directions the community must take to move towards the vision. They channel resources and actions that bring about real change in the community.
- **Land use action steps** are specific, finite actions or programs that achieve strategies.

Section Two contains background information about the natural and human environment. Citizens and city officials participating at community workshops relied on this information for creating the development strategies and land use action steps in the plan.

**VISION
DEVELOPMENT STRATEGIES
LAND USE ACTION STEPS**



A Vision for the Future

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

- Become a vibrant destination community for tourists and residents alike
- Use public and private investments to develop and diversify our economy
- Create and maintain diverse neighborhoods that serve all social and economic groups
- Develop an efficient transportation system serving the economic needs of Hoquiam



Hometown

Hoquiam

2028

Future Land Use

The distribution of future land uses in the City of Hoquiam shown in Figures 1 and 2 reflect a mix of continuing historic development patterns while introducing new ones to meet changing economic realities and demographic shifts. While the plan generally separates incompatible uses, it allows flexibility to intermix uses that undergo special review. The following Development Strategies provide guidance on the Future Land Use map and its application to future development.

1.0 Development Strategies for Future Residential Uses

Development Strategy 1.1: Residential Districts

Accommodate an estimated future residential population of 10,800.

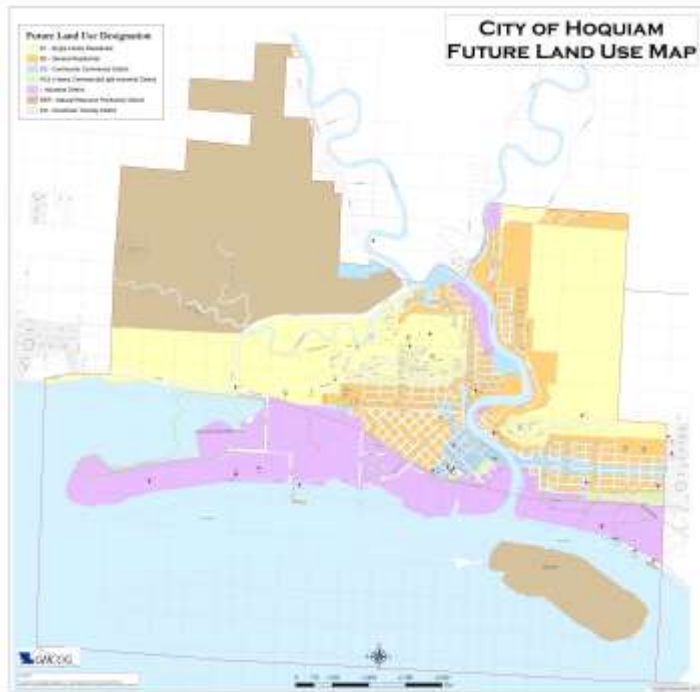
Over the next 20 years, Hoquiam anticipates a moderate increase in population of around 23%. Development patterns suggest there will be a need for 830 new housing units – 602 single-family dwelling units, 194 multi-family housing units. Currently, there is sufficient land area within the city's boundaries to accommodate the land area needed for residential growth.

Land Use Action Steps

- 1.1.A Maintain a General Residential District that reflects traditional development patterns. This district should provide a complete range of dwelling types at higher densities.

- 1.1.B Single-family residences are permitted uses at a maximum density of nine (9) dwelling units per acre. Duplex-family residences are permitted at a maximum density of eighteen (18) dwelling units per acre.
- 1.1.C Multi-family units are conditional uses at a maximum density of twenty-five (25) dwelling units per acre. The multi-family conditional use approval process will ensure compatibility between residential types by relying on varying levels of mitigation requirements given the size of the project. Mitigation requirements will differ for projects within three to four units, five to 24 units, and 25 units or more. Mitigation measures will minimally address traffic, glare, separation between buildings, open space/landscaping, and building heights where view protection is important.
- 1.1.D Maintain a Single Family Residential District that reflects traditional development patterns. This district should provide a complete range of dwelling types at lower densities.
- 1.1.E Single-family residences are permitted uses at a maximum density of five (5) dwelling units per acre. Duplex-family residences are permitted at a maximum density of ten (10) dwelling units per acre.
- 1.1.F Multi-family units are conditional uses at a maximum density of fifteen (15) dwelling units per acre. The multi-family conditional use approval process will ensure compatibility between residential types by relying on varying levels of mitigation requirements given the size of the project. Mitigation requirements will differ for projects within three to four units, five to 14 units, and 15 units or more. Mitigation measures will minimally address traffic glare, separation between buildings, open space/landscaping, and buildings heights where view protection is important.

Figure 1 **Future Land Use Map**



Development Strategy 1.2: Future Residential District

Emphasize the natural beauty of Hoquiam's environment as a centerpiece for selecting the location of future residential districts.

Hills, rivers, forestlands, and the Grays Harbor Estuary come together in Hoquiam. This makes for stunning views and natural landscape features that create unparalleled scenic opportunities for any community. Hoquiam needs to sustain and build on these features for choosing the location of neighborhoods and enhancing these characteristics in existing ones.

Land Use Action Steps

- 1.2.A Expand the boundaries of current residential zoning districts to the western shoreline of the Hoquiam River.
- 1.2.B Design and site homes in new neighborhood to prevent the blocking of scenic views of the Hoquiam River and the Grays Harbor Estuary.
- 1.2.C Encourage the protection of open space within neighborhoods, such as forestlands, wildlife corridors, and critical areas, by creating incentives within development regulations.
- 1.2.D Encourage and support the use of the techniques referenced in the LEED® (Leadership in Energy and Environmental Design) for Neighborhood Development rating system in new development.

Development Strategy 1.3: Other Land Uses in Residential Districts

Allow for small retail uses and community facilities within existing and new neighborhoods that serve local needs.

One attraction of many established neighborhoods in Hoquiam is the presence of neighborhood businesses and community facilities that support local needs. Convenience grocery and gas stations, hair salons, alteration shops, childcare facilities, and professional offices are examples of small-scale businesses that blend well into Hoquiam neighborhoods. Development regulations should encourage this trend. Additionally, new neighborhoods should incorporate community facilities in their design.

Land Use Action Steps

- 1.3.A Allow home occupations as an accessory use to residences in all zoning districts. However, home occupations cannot detract from the overall neighborhood with activities that create noise, odor, parking problems, or traffic.

- 1.3.B Retail and professional businesses may locate within residential districts after conditional review on lots that have direct access to designated arterials and 10,000 SF or less in area. Buildings listed under the Hoquiam Historic Register are exempt from the size and access requirements. Development regulations shall ensure that operation of these businesses do not detract from adjacent neighbors.

- 1.3.C Planned unit developments of five acres or more may integrate up to 15% of its land area to retail and professional uses that serve area neighborhood needs.
- 1.3.D Schools, churches, and municipal parks and recreation centers may be appropriate upon conditional review within residential neighborhoods.

2.0 Development Strategies for Future Commercial Uses

Development Strategy 2.1: Commercial Districts

Create vibrant community commercial areas that serve local and regional needs, protect existing uses, and promote opportunities for redevelopment and expansion.

Hoquiam's commercial centers include the downtown core and the eastside Simpson/Sumner – SR 101 Couplet. The downtown core presents some exciting redevelopment opportunities and the Simpson/Sumner Corridor exhibits potential for new businesses that serve regional and tourist retail and service needs. Similar commercial development may naturally extend to Lincoln Street in the future. The Plan anticipates expansion of the commercial areas in the future, especially along highway corridors and to the waterfront.

Land Use Action Steps

- 2.1.A Create a Community Commercial District that focuses on retail, service, professional, and tourist-related uses.
- 2.1.B The Community Commercial District incorporates the historic downtown area as well as high traffic areas along major arterials and state highways.

- 2.1.C Establish development standards and minimum performance requirements for the Community Commercial District.
- 2.1.D Develop an urban design plan that protects the appearance of development along SR 101.
- 2.1.E Encourage and support the use of the techniques referenced in the LEED® (Leadership in Energy and Environmental Design) for Neighborhood Development rating system in new development.

Development Strategy 2.2: Expansion of Commercial District

Allow the future extension of the Community Commercial District to the Hoquiam River and the Grays Harbor Estuary.

As industrial use of the Hoquiam River subsides, the opportunity exists to redevelop these lands into valuable commercial and mixed-use developments. The city encourages a master plan-type approach to developing these parcels effectively and efficiently for the community. Concomitant re zoning will be a useful tool to ensuring development patterns meet the intent of this plan and other adopted city plans and policies.

Land Use Action Steps

- 2.2.A New Community Commercial Districts have direct access to arterials or state highways.
- 2.2.B Proposals for extension of the district to these areas must include appropriate public access to the waterfront.
- 2.2.C Conversion of waterfront residential and industrial properties may occur if the proposed use does not impact or restrict adjacent uses.

Development Strategy 2.3: Simpson/Sumner Corridor

Allow the Simpson-Sumner Corridor (SR 101) from 20th Street to Myrtle Street to convert from residential to a mix of residential and general commercial uses.

Hoquiam anticipates seeing growth in the retail and services sector of the local economy as regional tourism grows. Given the increased traffic along the Simpson-Sumner Corridor, SR 101, future development patterns for adjacent properties are more appropriate for commercial than single-family residential.

However, the community must remain mindful of the development limitations in this area. Individual lots are relatively small and existing development patterns are dense. Conversion of existing residences to commercial structures may face difficulty, particularly in providing required off-street parking and proper ingress and egress from this busy arterial. Furthermore, there may be unintended conflicts between commercial activities and existing residential properties.

Therefore, the transition to a commercial zoning should be gradual to allow the careful analysis of long-term impacts. Innovative approaches to redistricting, such as concomitant rezones may prove beneficial in promoting quality development.

Land Use Action Steps

- 2.3.A Transition the zoning of the Simpson-Sumner Corridor from residential to commercial on a gradual property-by-property basis.
- 2.3.B The city may require rezone applicants to enter into a concomitant agreement as a condition of the rezone, and may through the agreement, impose development conditions designed to mitigate potential impacts.
- 2.3.C New development along the corridor must demonstrate that ingress and egress to the property will not increase congestion and safety issues for traffic along SR 101. Properties that rezone to commercial will screen adjacent residential properties from visual impacts by providing appropriate buffers.

Development Strategy 2.4: Downtown Focus

Support redevelopment and expansion of the Downtown to increase its economic viability for businesses and property owners.

Downtown Hoquiam is on the verge of change. Business and property owners are organizing to improve marketing and the physical layout of Downtown. The future success of the area will depend on integrating these two approaches into an area that presents a unique image that attracts locals and tourists alike. Finding connection to the waterfront is also important.

Land Use Action Steps

- 2.4.A Establish a Downtown Overlay District that allows flexibility in meeting development requirements because of historic development patterns.
- 2.4.B Allow a mix of high-density residential development within the Downtown Overlay District above the first floor of structures.
- 2.4.C Support efforts by Downtown business and property owners to develop and implement an urban design plan that blend public infrastructure improvements with private property design elements. Public infrastructure, such as streets, sidewalks, and public amenities should be the focal point for the area's design theme. Build upon the Design Districts concept with 1986 Downtown Waterfront Redevelopment Plan.
- 2.4.D Support public and private efforts to market Downtown Hoquiam locally and regionally.

Development Strategy 2.5: Office & Technology Parks

Create an Office and Technology Park Overlay District to accommodate the need for commercial office space and research and development facilities.

Office and Technology Parks offer significant opportunities for clean economic growth for Hoquiam. The campus-type environment blends well with development districts throughout Hoquiam.

Land Use Action Steps

- 2.5.A An Office and Technology Park Overlay District has access to city arterials or state highways.

- 2.5.B The types of uses appropriate for the district include professional and administrative offices serving such fields as medicine, law, financial services, real estate, government, education, and business. Research and development activities occur in fully enclosed structures that do not create detectable external environmental impacts.
- 2.5.C Allow supporting retail and business services and other complementary uses in the district, such as pharmacies and small-scale food and beverage services.
- 2.5.D Office and Technology Park Overlay Districts are appropriate for all districts if the District does not impact or restrict adjacent uses.
- 2.5.E Establish development standards and minimum performance requirements for the Office and Technology Park Overlay District.

3.0 Development Strategies for Future Industrial Uses

Development Strategy 3.1: Industrial District

Ensure a diverse manufacturing and manufacturing-related base for Hoquiam by designating lands appropriate for intensive industrial activities.

The communities of Hoquiam, Aberdeen, and Cosmopolis collectively create “The Harbor,” the historic manufacturing center of Grays Harbor County. Today, that role continues in Hoquiam, despite the exodus of several large manufacturing businesses over past 20 years. Although the wood products industry remains as a major contributor to the local economy, there have been recent major strides in industrial diversification. The greatest opportunities for industrial growth in Hoquiam remain facing the Grays Harbor Estuary.

Land Use Action Steps

- 3.1.A Create an Industrial District for land uses associated with extraction, processing, transportation, distribution, and wholesale activities.
- 3.1.B Industrial District lands have access to maritime, rail, aeronautical, and/or truck transportation systems.
- 3.1.C The district allows a mix of support activities as accessory uses in the district, such as offices, transshipment facilities, warehousing, and uses that benefit employees.
- 3.1.D Maintain the separation of industrial activities from residential and commercial uses with the use of buffers or transitional uses, such as heavy commercial/light industrial uses, parks, and community facilities.
- 3.1.E The location of industrial activities serving regional needs and requiring access to rail and marine links are most appropriate along the Grays Harbor Estuary shoreline south of the Simpson Avenue Bridge.
- 3.1.F Conduct an annual review to assess an adequate supply of appropriately zoned land for large- and small-scale manufacturing. Any expansion or retraction of industrial zoning should stress compatibility with adjacent land uses.
- 3.1.G Adopt operating performance standards for manufacturing and manufacturing-related uses to ensure compatibility with adjacent uses.
- 3.1.H Existing properties with manufacturing activities along the Hoquiam and East Fork Hoquiam Rivers north of the Simpson Avenue Bridge will maintain

their industrial zoning status as long as the use remains active. If the property remains inactive for a period of one year, it is consistent with this plan for the city to change the zoning of the property to a residential or commercial designation.

Development Strategy 3.2: Heavy Commercial/Light Industrial District

Create a Heavy Commercial/Light Industrial District to accommodate the need for smaller scale heavy commercial and light industrial activities on individual lots.

Hoquiam has a need for areas serving smaller scale heavy commercial and light manufacturing uses that do not blend well with standard commercial activities yet do not require the larger properties common to the industrial zone. These are the small machine shops, heavy equipment sales and servicing, and outdoor storage that make up an important part of the local economy. Many of these businesses serve not just local, but regional needs as well.

The typically low-impact nature of these uses makes them good transitional zones, especially separating industrial from general commercial and residential uses.

Land Use Action Steps

- 3.2.A The Heavy Commercial/Light Industrial District is for businesses engaged in light industry, wholesale trade, processing, servicing, assembly, and distribution wholly contained in buildings with relatively minor impacts on the surrounding area. The district also provides for selected sales and services inappropriate in the Community Commercial District due to size or operating characteristics of the use.

- 3.2.B Heavy Commercial/Light Industrial Districts consists of parcels one acre or less in area.
- 3.2.C Appropriate areas for the Heavy Commercial/Light Industrial Districts are adjacent to the Industrial District or in areas less visible to commercial and residential uses. Direct access to arterials is essential.
- 3.2.D Establish development standards and minimum performance requirements for the Heavy Commercial/Light Industrial District.

Development Strategy 3.3: Industrial Development & Infrastructure

Maintain existing and promote future industrial development through infrastructure planning.

The availability of public facilities and services is essential for retaining existing industrial uses and attracting new ones. The city should manage its infrastructure to reserve capacity for future industrial growth or build facilities capable of expansion if needed.

Land Use Action Steps

- 3.3.A Plan for reserves within the city's sewer and water systems for serving future industrial growth as demand occurs.

4.0 Development Strategies for Natural Resource Production Lands

Development Strategy 4.1: Natural Resource Production District

Encourage the continuation of long-term commercial forestry within the city to provide open space and as a reserve for future land development.

Approximately 35% of Hoquiam's land base consists of privately owned working forestlands. The lands require careful management to ensure their future orderly development, especially in relationship to sewer, water, and streets. Until these lands convert to urban uses, their primary use is for commercial forestry. This will benefit retention of open space and critical areas as well.

Land Use Action Steps

- 4.1.A Create a Natural Resource Production District for managing lands where the primary use is the commercial production and harvest of trees.
- 4.1.B Other allowed uses in the Natural Resources Production District includes passive recreation, educational uses, and public and private utilities.
- 4.1.C Any conversion of lands within the Natural Resources Production District to another land use designation should ensure compatibility with adjacent properties and have appropriate access to city utilities and streets.
- 4.1.D The city should prepare both a buildable lands inventory and analysis of potential street design for land within Natural Resources Production District. These studies will identify where development will most likely occur and ensure an efficient street system design for future use.
- 4.1.E Future sewer and water planning should examine the opportunities and constraints involved in extending these systems to properties throughout the district.

5.0 Development Strategies for Planned Unit/Mixed-Use Developments

Development Strategy 5.1: Planned Unit/Mixed-Use Development District

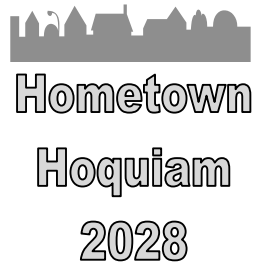
Encourage a mix of housing types and/or commercial development in appropriately designated districts and when compatible with nearby uses.

Flexibility and innovation are essential for attracting and creating large-scale, unique developments for Hoquiam. A planned unit/mixed-use development tool will provide the development community the chance to do just that in a variety of settings that emphasize the natural beauty and amenities of the land.

Land Use Policies

- 5.1.A Create a Planned Unit Development/Mixed-Use Overlay District that allows flexibility in urban design of parcels and/or a mix of residential and commercial uses.
- 5.1.B Establish development standards and minimum performance requirements for the Planned Unit Development/Mixed-Use Overlay District.
- 5.1.C Allow the extension of the Planned Unit Development/Mixed-Use Overlay District over the Single-Family and General Residential Districts.
- 5.1.D Use the Planned Unit Development/Mixed-Use Overlay District to encourage new neighborhoods that provide a broad range of housing types and allow flexibility in design to encourage open space and protect critical areas by using density and dimensional bonuses.

- 5.1C Allow the extension of the Planned Unit Development/Mixed-Use Overlay District within the Industrial Districts; provided, however, that the extension of the Overlay District does not impact or restrict adjacent forestry activities.



Environmental Management

6.0 Development Strategies for Managing Environmental Assets and Constraints

Development Strategy 6.1: Wetlands

Protect wetlands to preserve their value for flood and stormwater control, improving ground and surface water resources, and fish and wildlife habitat.

Wetlands serve a valuable role for the community. They reduce the potential for flooding during storm events by slowing and absorbing rainfall and high river flows. Their ability to filter pollutants and sedimentation protect ground and surface water quality for people and wildlife. Along Hoquiam's rivers, wetlands help stabilize shorelines and properties from excessive erosion. Fish and wildlife depend on wetlands for food production, rearing, and habitat. The loss of wetlands in Hoquiam would have a serious impact on the quality of life for the community.

Land Use Action Steps

- 6.1.A The 1997 *City of Hoquiam Wetland Inventory* delineates the general location of wetlands within the city. The [Washington State Wetlands Identification and Delineation Manual](#) (Ecology Publication #96-94) is the guiding document to determine the extent of wetland boundaries. The [Washington State Wetlands Rating System for Western Washington](#) (Ecology Publication #04-06-025) is the guiding document for determining the resource value of wetlands.

- 6.1.B The city requires development activities to mitigate impacts to wetlands by implementing buffer requirements appropriate to their value. The city relies on the best available science to determine buffer widths. Currently, the [Washington State Wetlands Rating System for Western Washington](#) will serve as a guiding document for determining buffer widths.
- 6.1.C The city encourages flexibility in determining wetland buffer widths. Assessments conducted by qualified experts may show the need for greater or lesser distances provided in the [Washington State Wetlands Rating System for Western Washington](#) to protect wetland values.
- 6.1.D The city maintains a goal of no-net loss of wetlands. However, limited development of wetlands is possible if no practical alternative exists for locating a project elsewhere or if protection precludes any reasonable use of the property. Loss or alteration of wetlands requires replacement mitigation of equal or greater value.
- 6.1.E The city supports efforts for restoring degraded wetlands to increase their value for flood control and habitat for fish and wildlife. This includes restoring connectivity to rivers and streams cut-off by past development.
- 6.1.F Public and nonprofit entities are encouraged to acquire wetland areas within the city to ensure their retention as open space, parkland, or community stormwater control.
- 6.1.G Encourage the preservation of wetlands on private property by allowing density and dimensional bonuses.

Development Strategy 6.2: Geologically Hazardous Areas

Regulate development activities in geologically hazardous areas to protect the public health, safety, and welfare.

Geologically hazardous areas are those at risk to erosion, sliding, earthquake, or other geologic events. The inventory in Section 2 defines and delineates the presence of these lands within the city. However, existing knowledge about the location of these areas is extremely limited and very general. Additional study and analysis will be essential for any development project located in or around suspected geologically hazardous areas.

Most geologically hazardous areas are not suitable for residential, commercial, or industrial development and may impact adjacent properties as well. It is in the community's interest to manage development in and around these areas carefully to minimize risk to life and property.

Land Use Action Steps

- 6.2.A 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. Prohibit development on slopes 40% or more in grade.
- 6.2.B Limit development on soils with slopes greater than 15% or severe erosion hazard by encouraging the preservation of open space. Use cluster development or density and dimensional bonuses as incentives to developers to avoid geologically hazardous areas.

- 6.2.C Minimize and control soil erosion during and after construction by using best management practices and retaining native vegetation to the greatest extent practical.
- 6.2.D Preserve natural topographic, geologic, and hydrological features to the greatest extent possible to prevent erosion and slope instability.
- 6.2.E Encourage the retention of open space in geologically hazardous areas by allowing density and dimensional bonuses.
- 6.2.F Preserve natural vegetation along the top, toe, and sides of steep slopes in excess of 40% in grade.
- 6.2.G The city will coordinate with the Department of Natural Resources all Forest Practices Application Permits to ensure that harvest and road building activities do not create unstable slopes or severe erosion within geologically hazardous areas.
- 6.2.H Encourage essential public facilities to either locate outside of geologically hazardous areas or upgrade structures to withstand potential loss in the event of earthquake.

Development Strategy 6.3: Fish & Wildlife Habitat Conservation Areas

Protect Fish and Wildlife Habitat Conservation Areas through incentives, restoration efforts, and development regulations.

Fishing, hunting, and wildlife viewing currently are major cultural features of Hoquiam life. Sharing this with future generations will be possible only if fish and wildlife resources remain in and around the community.

Poorly planned and implemented development can impact the habitat of fish and wildlife so drastically that these resources can literally disappear within a very short period. Species such as salmon and steelhead already have fallen to depressed levels. Understanding where these habitats are in Hoquiam, along with protecting them as an integrated ecosystem, is critical to retaining fish and wildlife resources.

Land Use Action Steps

- 6.3.A Coordinate development review with state and federal fish and wildlife agencies and organizations to protect critical habitat.
- 6.3.B Protect the function of fish and wildlife conservation areas by requiring appropriate buffers.
- 6.3.C Prepare a study that identifies and delineates fish and wildlife conservation areas in Hoquiam that includes migration corridors that prevent the isolation of habitats. Maintain the accuracy of this information through regular updates.
- 6.3.D Allow density and dimensional bonuses for private property owners as incentives for protecting fish and wildlife habitat conservation areas and corridors.
- 6.3.E Encourage and facilitate programs and projects leading to restoration of fish and wildlife habitat areas in the city. The city adopts by reference the [Chehalis Basin Salmon Habitat Restoration and Protection Plan for WRIs 22 and 23](#) to assess the needs of salmon within the Hoquiam River and its tributaries.

- 6.3.F Integrate the protection of fish and wildlife habitat conservation areas with other city, state, and federal regulations to ensure a comprehensive approach.

Development Strategy 6.4: Frequently Flooded Areas

Protect the health, safety, and welfare of Hoquiam by minimizing the threat of flooding and flood-related damage.

It is possible to avoid, or at least minimize, the impact of flooding to the public's health, safety, and welfare by properly managing development impacts in the community. This not only includes actions within the floodplains, but adjacent uplands, too. Restoring the historic connectivity between rivers and streams to wetlands and floodplains are natural flood control measures that provide high benefit at a lower cost than man-made structures. Development regulations and incentives are necessary to ensure this approach.

Land Use Action Steps

- 6.4.A Maintain the city's participation and rating in the National Flood Insurance Program by requiring development to meet minimum program requirements.
- 6.4.B Continue to work with the National Flood Insurance Program to update the Flood Hazard Map of the city.
- 6.4.C Prohibit any development within the floodway that would reduce the capacity of the floodway.

- 6.4.D The city may require studies as part of the state environmental review process and require mitigation measures for new development within frequently-flooded areas. Mitigation may include flood storage improvements, flood-proofing of structures, and elevating structures.
- 6.4.E Use the most recent [Stormwater Management Manual for Western Washington](#) to set stormwater management requirements for new and expanded developments.
- 6.4.F When practical, require the use of natural systems over the installation of engineered structures, impoundments, or other engineered alterations for protecting development in frequently flooded areas.
- 6.4.G Integrate flood control measures with projects that benefit fish and wildlife conservation areas and wetlands.

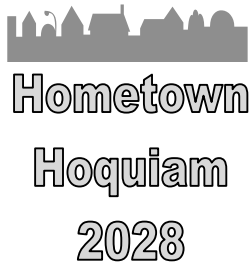
Development Strategy 6.5: Surface Waters

Protect and manage surface water quality within the city.

Hoquiam's fresh and marine surface waters are important community and regional resources. The waters and shorelines provide significant economic benefits through marine commerce, recreation, tourism, and aquaculture. They serve as essential fish and wildlife habitats and migration corridors. The creeks, rivers, and the estuary create a natural stormwater conveyance system. Finally, Hoquiam's surface waters create a distinctive and aesthetically pleasing backdrop that visually defines the essence of the community's past, present, and future. Thus, protecting these assets is important.

Land Use Action Steps

- 6.5.A Manage future development within the city to maintain historic stormwater discharge rates and volumes into surface waters. Use the most recent [Stormwater Management Manual for Western Washington](#) to set stormwater management requirements for new and expanded developments.
- 6.5.B Mitigate impacts to surface waters created by stormwater runoff through the development of regulations and incentives that maintain water quality and quantity.
- 6.5.C Increase the number of opportunities along Hoquiam's fresh and marine waterfronts for public access. The city, in partnership with community groups, should facilitate the development of a public access plan that would identify potential access points, trails, and strategies for making them possible.
- 6.5.D Promote restoring degraded riparian areas that benefit fish and wildlife by encouraging projects and providing incentives to property owners.
- 6.5.E Support those organizations and agencies that provide public education about the value of protecting and enhancing surface waters.
- 6.5.F Participate in regional watershed planning through the [Chehalis Basin Partnership](#) to promote Hoquiam's interests and acquire financial resources to implement action steps within the Comprehensive Land Use Plan. The city adopts by reference the [Chehalis Basin Watershed Management Plan](#).



Housing

Homes and neighborhoods are the very heart of Hoquiam. They contribute to people's lives and the community socially, physically, and economically. Without the availability of quality, affordable housing of choice, Hoquiam will experience little likelihood of growth in population or in the commercial and industrial sectors.

Housing and neighborhoods in the city are currently experiencing some significant challenges. Homeownership is down, the aging housing stock is deteriorating, and growth in new housing has been slow. The city will need to assume an active role in encouraging the improvement of existing homes and the development of new ones. The city is also committed to preserving and enhancing all of its neighborhoods.

7.0 Development Strategies for Homes and Neighborhoods

Development Strategy 7.1: Housing of Choice

Encourage the development of new neighborhoods within the city that allow a diverse range of housing choice.

The citizens of Hoquiam are a diverse community consisting of different ages, household-types, and economic backgrounds. Many existing neighborhoods in Hoquiam reflect this broad makeup with its mix of housing types that allow such housing of choice.

Land Use Action Steps

- 7.1.A Create residential zoning districts that allow for a wide range of housing types that include single- and multi-family residential dwellings.

- 7.1.B Allow accessory dwelling units within single-family dwelling units and as separate structures. Create development standards for accessory dwelling units that ensure their compatibility with surrounding neighborhood characteristics.
- 7.1.C Use planned unit development procedures to encourage affordable housing for low- and moderate-income households by allowing density and dimensional bonuses.
- 7.1.D Allow residential units within buildings above the first story in commercial districts.
- 7.1.E Create flexible density and dimensional requirements for existing, nonconforming lots to encourage infill development.
- 7.1.F Encourage and support the use of the techniques referenced in the LEED® (Leadership in Energy and Environmental Design) for Neighborhood Development rating system.

Development Strategy 7.2: Improving Neighborhood Infrastructure

Support efforts aimed at upgrading neighborhood infrastructure.

Despite the charm of many existing city neighborhoods, basic infrastructure in some areas is badly deteriorating. Not only does this include the “visible” infrastructure of streets, curbs, sidewalks, and lighting, but the “invisible” ones such as stormwater, sewer, and water. The failure to maintain these systems within neighborhoods can in the long run affect the health, safety, and value of properties in an affected area.

Citizens and city hall need to work closely together to find equitable solutions and partnerships that solve neighborhood infrastructure needs.

Land Use Action Steps

- 7.2.A The city will work with neighborhood residents and community organizations to assess and prioritize infrastructure needs as well as develop strategies for meeting them.
- 7.2.B The city will investigate and promote a range of innovative and standard financing programs for constructing neighborhood infrastructure.
- 7.2.C Encourage community-based organizations and groups, such as NeighborWorks® of Grays Harbor County, to work with city hall to revitalize neighborhoods through innovative public-private partnerships.

Development Strategy 7.3: Improving Neighborhood Appearance

Citizens, community groups, and the city will take an active role in improving the appearance of neighborhoods.

The need to improve the appearance of Hoquiam's neighborhoods is a frequently heard complaint by citizens. They have been very vocal in their criticism about how some neighbors fail to keep up their properties in reasonable repair and appearance. Lawn cleanup, removal of rundown and vacant homes, home maintenance, and disposal of junk cars are neighborhood priorities.

Land Use Action Steps

- 7.3.A The city will continue its active enforcement of codes aimed at removing derelict structures, junked automobiles, and other health and safety standards.
- 7.3.B Citizens should actively support local and regional organizations that encourage home repair and improvement programs, such as Coastal Community Action Program, NeighborWorks® of Grays Harbor County, and Rebuilding Together.
- 7.3.C The city should explore developing a yard waste recycling program in cooperation with Hometown Sanitation.
- 7.3.D The city and the community should support annual cleanup events.
- 7.3.E Develop a service program that helps Hoquiam seniors maintain and repair their properties.
- 7.3.F Promote homeownership programs that increase the number of homeowners in Hoquiam.

Development Strategy 7.4: Housing Rehabilitation

Promote housing rehabilitation programs for low- and moderate-income households and people with special needs.

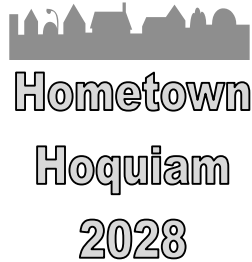
Hoquiam has a large stock of older homes that need repair. Many are in dilapidated shape because of a combination of weather and the inability of homeowners to afford repairs. These homes can get a second life through a variety of programs that citizens can access through local nonprofit programs. Hoquiam can protect its

housing stock by partnering with these organizations and encouraging citizens to use them.

There is also an extensive need for home improvements for people with special needs who have a wide range of disabilities.

Land Use Action Steps

- 7.4.A The city adopts by reference the [Creating Safe and Affordable Housing of Choice for the Low- and Moderate-Income People of Grays Harbor County](#) as the framework for approaching housing rehabilitation within Hoquiam.
- 7.4.B The city will partner with local housing organizations, such NeighborWorks of Grays Harbor County, Habitat for Humanity, and Rebuild America, to encourage citizens to rehabilitate or construct new homes.
- 7.4C Exempt homes that are nonconforming uses in nonresidential districts from code provisions that limit repair or expansion.



Transportation

The urban transportation system is a vital part of Hoquiam's infrastructure and historically was the framework of the city's development. Vehicular, rail, air, and marine transportation systems play a major part in every facet of Hoquiam's residential, commercial, and industrial lifeblood. Because of its influence on land use, the transportation section of this plan is an important one.

Transportation planning in Hoquiam focuses on maintaining existing systems, planning new ones for undeveloped areas of the city, and working together regionally with the State of Washington and neighboring jurisdictions to improve state highways and reduce their impact on the community.

8.0 Development Strategies for Transportation Systems

Development Strategy 8.1: Balanced Transportation System

Design a balanced and integrated transportation system consistent with the needs of residential, commercial, and industrial land uses.

Land Use Action Steps

- 8.1.A Develop public street standards that serve multiple transportation functions, including automobiles, trucks, transit, pedestrians, and bicycles.
- 8.1.B Require the design of street systems serving new developments to complement existing street patterns.
- 8.1.C Locate new commercial uses and community facilities, if possible, near major transit routes and convenient to pedestrians and bicyclists.

- 8.1.D Retain and promote commercial and industrial development by maintaining and improving access to an integrated system of highway, rail, marine, and aviation links.
- 8.1.E Work closely with the Washington State Department of Transportation to ensure State Routes 101 and 109 remain consistent with the vision, development strategies, and land use action steps in the Comprehensive Land Use Plan and other city plans and policies.
- 8.1.F Support the Port of Grays Harbor and other private property owners in maintaining and improving marine-related transportation links.
- 8.1.G Prepare a circulation plan for the undeveloped lands in the Natural Resource Production District that results in a logical integration with existing street patterns as future development in this area occurs.
- 8.1H Support the efforts of the Port of Grays Harbor to maintain, improve, and expand Bowerman Airfield as a critical regional public facility and economic development. Protect the glide slope for the airfield by limiting the height of structures within the approach.

Development Strategy 8.2: Transportation Improvements

Design and implement safe and efficient transportation improvements.

Land Use Action Steps

- 8.2.A Prepare a study examining the possibility of constructing a bridge over the Hoquiam River to connect North Hoquiam at or near the current railroad bridge. The eventual completion of the bridge is critical for ensuring

emergency access to and encouraging future development in the Woodlawn area.

- 8.2.B The city adopts a Level of Service standard of C or better for designing city locals, collectors, or arterials and evaluating development impacts to traffic.
- 8.2.C The city encourages the Washington Department of Transportation to maintain a Level of Service standard D or better for SR 101 and 109 by employing a variety of transportation system management strategies.
- 8.2.D The city endorses the SR 101 Regional Circulation Project to improve traffic flow through and within Hoquiam. Hoquiam will take a proactive role in encouraging the neighboring jurisdictions of Aberdeen and Grays Harbor County to support this project not only as a critical regional transportation project, but an economic development one as well.
- 8.2.E The city encourages the Washington State Department of Transportation to consider and implement short- and long-term transportation management strategies for the SR 101 Couplet. The goal is to improve circulation in the downtown area for both residents and tourists. Improvements may include rerouting traffic flow, accessible parking for automobiles and recreational vehicles, and signage.
- 8.2.F Require new streets, street improvements, property development and improvement to provide sidewalks.
- 8.2.G Develop and implement a plan for bicycle lanes throughout the city that links neighborhoods, commercial centers, and community facilities.

- 8.2.H Support Grays Harbor Transit to maintain and expand mass transit services throughout the city and to other regional destination.
- 8.2.I Plan and develop an intercity pedestrian trail system. Potential projects include a walkway down the 5th Street Extension, along the Hoquiam River on the levee to North Hoquiam.
- 8.2.J Study the feasibility of changing Levee Street to a one-way street.
- 8.2.K Work with the Hoquiam School District to develop safe pedestrian routes and improvements for students.
- 8.2.L Upgrade railroad crossings and tracks within rights-of-way to improve traffic safety and street conditions. Work with the Puget Sound and Pacific Railway to reduce and minimize traffic delays created by trains.
- 8.2.M The design of future streets should avoid or minimize their physical impact on geologically hazardous areas and frequently flooded areas.

Development Strategy 8.3: Design Standards and Amenities

Develop and adopt design standards for city streets that improve livability and appearance and allow for affordable housing development.

Land Use Action Steps

- 8.3.A Develop and implement a street tree program coordinated with property owners that protects public infrastructure investments and augments the appearances of rights-of-way.

- 8.3.B Develop and implement a coordinated plan for street amenities in residential, commercial, and industrial districts that deal with lighting, street furniture, signage, and similar improvements.
- 8.3.C Create flexible street standards for residential developments that encourage affordable housing without sacrificing traffic efficiencies and safety.
- 8.3.D Encourage the alignment of streets in new developments to take advantage of views and landmarks in the city.
- 8.3.E Encourage the design and development of entryways at the city limits that welcome visitors and provide information about businesses and attractions in Hoquiam.

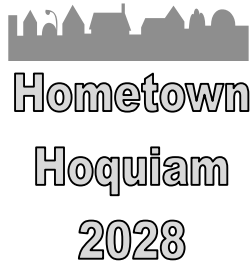
Development Strategy 8.4: Funding Transportation

Fund transportation infrastructure maintenance and improvements using a combination of local, state, and federal funding tools.

Land Use Action Steps

- 8.4.A Develop a long-term transportation improvement plan that identifies construction and improvement priorities, including funding strategies.
- 8.4.B Study the potential adoption and implementation of a Transportation Impact Fee system to pay for impacts to traffic created by new residential, commercial, and industrial development.

- 8.4.C Use grants, such as the Community Development Block Grant Program, to upgrade street and sidewalk improvements in low- and moderate-income neighborhoods.
- 8.4.D Encourage and organize neighborhoods to approve local improvement districts to improve streets, alleys, and sidewalks.
- 8.4.E City expenditures on 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 Transportation Improvement Program;
 - 4. Add desired new streets or amenities.
- 8.4.F New development will pay its own way for street, alleys, and sidewalks required through the city's development regulations and the State Environmental Policy Act Environmental Review process.
- 8.4.G The Comprehensive Land Use Plan incorporates the Six-Year Transportation Improvement Program by reference, as adopted by the Hoquiam City Council.



Public Facilities and Services

In addition to providing a transportation system, public facilities and services are equally critical components of the city's basic function. Physical facilities for clean water, wastewater, stormwater, and community facilities are major investments that everyday life relies on. The provision of public services such as police, fire, and community development are vital to the well-being of citizens as well. The sole responsibility of city government, public facilities and services ensure the health, safety, and welfare of citizens.

The role of the Comprehensive Land Use Plan is to ensure that the city continues to provide public facilities and services at acceptable standards in the face of future growth.

9.0 Development Strategies for Public Facilities and Services

Development Strategy 9.1: Meeting Future Demands

Provide effective and efficient public facilities and services that meet current and future population demands.

Land Use Action Steps

- 9.1.A Prepare a series of studies that analyze the capacity of all public facilities to meet current and future population growth and set Level of Service Standards.
- 9.1.B Maintain current quality of police, fire, and parks by ensuring that current Level of Service standards continue as future growth occurs.

- 9.1.C Keep sewer, stormwater, and water utility plans up-to-date. Include development scenarios within each of these functional plans that examine serving potential growth in the Natural Resource Production District.
- 9.1.D Provide public facilities and services for new development in a timely manner so adequate facilities are available when development occurs.
- 9.1.E 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.
- 9.1.F Schedule and phase utility extensions to occur concurrently with expected new development.
- 9.1.G Coordinate land use decisions with the Capital Facilities Plan and its listed priorities.

Development Strategy 9.2: New Development

Establish public facilities and services requirements for new development within the city.

Land Use Action Steps

- 9.2.A All new development shall connect to the city water system.
- 9.2.B All new development shall connect to the city sewer system.
- 9.2.C Future development shall provide water, sewer, and storm drainage service as outlined in respective system plans.

- 9.2.D Create incentives that encourage alternative green development standards that reduce impacts to water, sewer, and stormwater systems and promotes their conservation. Future city development standards and codes may refer to the techniques referenced in the LEED (Leadership in Energy and Environmental Design) for Neighborhood Development rating system, and the Low Impact Development Technical Guidance Manual for Puget Sound.

Development Strategy 9.3: Funding Public Facilities and Services

Pay for the cost of public facilities and services fairly between residents, businesses, and new development.

Land Use Action Steps

- 9.3.A All city residents will contribute to correcting existing deficiencies in public facilities and services.
- 9.3.B New development shall pay its own way through requirements for improvements in subdivision regulations, development charges for sewer and water hook-ups, and off-site impacts determined through Threshold Decisions made under the State Environmental Policy Act.
- 9.3.C The city will support public/private partnerships to develop new or expanded public facilities and services.
- 9.3.D 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 and in functional plans;
4. Add desired new public facilities and services.

- 9.3.E The city should encourage and work with property owners to improve neighborhood and commercial infrastructure through Local Improvement Districts (LIDs) and other innovative financing agreements, as permitted by law.
- 9.3.F When funding is available, the city may participate in developer initiated facility extensions or improvements, but only to the extent that the improvements benefit the broader public interest.
- 9.3.G. Investigate the feasibility of creating incentives for developments that utilize low impact development strategies.

Development Strategy 9.4: Emergency Planning

Ensure the long-term function and safety of providing public facilities and services during times of emergency.

Land Use Action Steps

- 9.4.A Prepare a City of Hoquiam element to the Grays Harbor County [All-Hazards Mitigation Plan](#) that examines potential impacts to public facilities

and services and makes recommendations for protecting critical city assets.

- 9.4.B Construction of future public facilities and services should avoid critical areas if practical.
- 9.4.C Plan for and coordinate with other local, state, and federal jurisdictions in providing public utilities and services during emergencies.

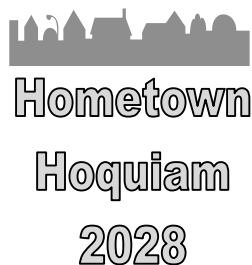
Development Strategy 9.5: Siting Public Facilities

Public facilities serving the community should be in locations commensurate to their function and need.

Land Use Action Steps

- 9.5.A The city shall prepare a fire services study to evaluate the adequacy of the eastside fire station.
- 9.5.B The downtown should remain the business center for the City of Hoquiam. The city will maintain its properties in a manner that contributes the overall appearance of this area.
- 9.5.C The city will encourage other local and state agencies to site offices and public facilities in the downtown area.
- 9.5.D The location of public facilities of an industrial or heavy commercial character should be in the Heavy Commercial/Light Industrial and Industrial Districts.

- 9.5.E The future siting, design, and improvement of city buildings should safeguard them from natural disasters, such as floods and earthquakes.



Utilities

The City of Hoquiam needs adequate electrical, telecommunications, and natural gas for future growth at current or better levels of service. Although the city does not own or deliver these services, utilities can influence how future development occurs within the city, including its appearance.

The city will work closely with utility providers to ensure conformance with the Comprehensive Land Use Plan as well as make them aware of potential impact of growth on their delivering these services to the public.

10.0 Development Strategies for Utilities

Development Strategy 10.1: Cooperative Planning

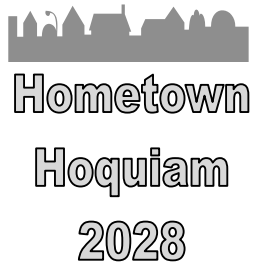
Actively work with public and private utility providers to ensure they meet the needs of future growth in a manner consistent with the Comprehensive Land Use Plan.

Land Use Action Steps

- 10.1.A Work with utility providers to establish Levels of Service standards and to identify strategies for satisfying the needs of existing customers and future growth.
- 10.12.B Encourage utilities to consolidate their facilities where technically feasible. Telecommunication facilities should share towers, poles, antennae, trenches, easements, and substation sites.
- 10.1.C Utility services within the city shall be underground except when not technically feasible or exceeds normal construction costs. Other above

ground facilities should use appropriate design and screening in residential and in the Community Commercial Districts.

- 10.1.D The location of major electrical and gas utility corridors should be outside the city limits.
- 10.1.E Coordinate city work in rights-of-way with utility capital improvements.



Parks and Open Space

Parks provide an essential ingredient to the high quality of life for Hoquiam residents. As the population of Hoquiam grows, the demand for its parks and recreational programs will increase. To maintain this asset, the supply of these parks and programs must keep pace with the demand placed on them by a growing population.

Open space also plays a key role in the quality of life for the community. The policies below provide a definition of open space as applied to Hoquiam and its surroundings and provide a framework for the identification and preservation of these areas.

11.0 Development Strategies for Parks and Open Space

Development Strategy 11.1: Parks for Everyone

Provide a comprehensive park system that meets the recreational needs of all citizens.

Land Use Action Steps

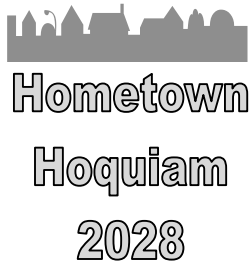
- 11.1.A The Comprehensive Land Use Plan adopts by reference the Hoquiam Parks and Recreation Plan.
- 11.1.B The city shall explore using a variety of funding tools and sources to maintain Level of Service standards for parks as the population increases.
- 11.1.C Update the Parks and Recreation Plan to plan for the anticipated growth projected in the Comprehensive Land Use Plan, especially potential development in the Natural Resources Production District area.

Development Strategy 11.2: Managing Open Spaces

Manage Hoquiam's land base to assure an adequate supply of diverse open space for recreation and protection of critical areas.

Land Use Action Steps

- 11.2.A Encourage the retention of open space critical areas within the city, particularly in relation to wetlands, geologically hazardous areas, and fish and wildlife conservation areas.
- 11.2.B Use critical area ordinances and development incentives as tools to preserve open space on private property within the city limits.
- 11.2.C Amend the Parks and Recreation Plan to identify key open space areas to acquire through outright purchase or obtaining conservation easements.
- 11.2.D Explore creating a transfer of development rights or mitigation banking program for open space within the city limits.
- 11.2.E Coordinate the retention of open space to preserve fish and wildlife corridors.



Economic Development

The City of Hoquiam is undergoing an economic transition that is seeing new types of industrial activities come to the waterfront, growing opportunities for tourism, and significant challenges to the retail sector. Currently, there is steady progress happening that eventually will return Hoquiam to its former economic position in the county. Therefore, it is essential that the Comprehensive Land Use Plan support, sustain, and nurture the community's economic rebirth.

Planning that is either too stringent or loose can stymie growth. The reasonable approach for Hoquiam at this time is to find an appropriate balance between encouraging change while not losing sight of retaining those essential qualities that make Hoquiam a unique and wonderful place to live. Following this fine line requires an innovative and flexible mindset to managing development. It also requires the frequent fine-tuning of the plan and development regulations to adjust appropriately to the situation at hand.

12.0 Development Strategies for Economic Development

Development Strategy 12.1: Framework for Economic Development Planning

Provide a comprehensive framework that will encourage the creation of a diverse and strong local economy.

Hoquiam has been undergoing a comprehensive community and economic development planning process since 2005 and has identified a series of strategies and action steps for change.

Land Use Action Steps

- 12.1.A The Comprehensive Land Use Plan adopts by reference the Hometown Hoquiam Phase 2 Economic Development Strategic Action Plan: 2008-2012.

Development Strategy 12.2: Managing the Development Review Process

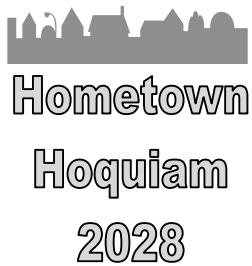
Ensure that the Comprehensive Land Use Plan furthers the city's economic development efforts.

To be effective as an economic development tool, the Comprehensive Land Use Plan needs to undergo continual review, analyzed with current events in the city, and adjusted accordingly to continue to meet the vision of this plan and the other plans adopted by reference.

Land Use Action Steps

- 12.2.A The Planning Commission should review and make recommendations annually on adjustments to the Comprehensive Land Use Plan and Hometown Hoquiam Phase 2 to ensure consistency between the two documents.
- 12.2.B Development review through the plan and its implementing regulations should be as streamlined as possible without sacrificing thoroughness.
- 12.2.C The city should explore using performance standards rather than standard specifications within its development regulations to encourage innovation and flexibility.
- 12.2.D Annually review land development applications to evaluate the effectiveness and efficiency the Comprehensive Land Use Plan at addressing the development review process.

Background Information



Natural Environment

1.0 Location

The City of Hoquiam, the second largest city in Grays Harbor County, lies along the north shore of the Grays Harbor Estuary and straddles the mouth of the Hoquiam River. The Hoquiam River flows from the north and divides the city into East and West Hoquiam. The city limits covers 13.27 square miles² and extends over the water to include Rennie and Moon (Bowerman Airfield) Islands and the North Channel.

Highway 101 is the major state highway serving Hoquiam. The City of Aberdeen shares Hoquiam's eastern boundary. Other cities to the east include Cosmopolis (6.5 miles), Montesano (15 miles), Elma (25 miles), McCleary (32.5 miles), Oakville (39 miles), and Olympia (53.5 miles). Cities to the west include Ocean Shores (21.5 miles) and Westport (25.6 miles). Seattle lies approximately 113 miles to the northwest.

Most of the city lies in Range 10 W of the Willamette Meridian (WM) while a small portion lies in Range 9 W WM approximately east of 28th Street. The city is further divided between Townships 17 and 18 N. The latitude and longitude of the corner of Emerson and Lincoln Streets is N46° 53' 14" and W123° 58' 85".

1.1 Climate

Climate in Hoquiam is influenced by the combination of the prevailing direction of the wind, the surface temperatures of the Pacific Ocean, the Coast and Cascade Mountain Ranges, and the position and intensity of the large high- and low-pressure centers over the Pacific Ocean. The result of these factors working together create

² The city ranks 27th in total area

cool, comparatively dry summers and mild, wet winters. The air typically is moist and the range in annual temperature is narrow.

During the spring and summer, the prevailing winds from the northwest bring drier weather. In the fall and winter, low-pressure systems near the Aleutian Islands cause winds to bring moisture laden winds from the west and southwest. During intense winter storms, winds follow a more southerly course, with velocities normally ranging 50 to 70 miles per hour.

The table below from the National Weather Service shows monthly averages for temperature, precipitation, and snowfall.³

Table 1 **Monthly Totals and Averages, Hoquiam Bowerman Station, Years 1971 – 2000**

Monthly Totals/Averages	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Max. Temp. (°F)	46.8	49.6	52.7	56.2	60.2	63.6	67.2	68.2	67.8	60.5	51.7	46.8	57.6
Min. Temp. (°F)	37.3	38.0	39.5	42.0	46.4	50.1	52.9	53.6	51.2	45.7	40.7	37.3	44.6
Precipitation (in.)	9.79	8.39	7.24	4.98	3.38	2.32	1.30	1.50	2.89	5.91	10.30	10.47	68.48
Snowfall (in.)	1.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.7

³ NOWData at <http://www.weather.gov/climate/xmacis.php?wfo=sew>

Table 2 **Highest Daily Precipitation Events, Hoquiam Bowerman Station, Years 1953-2007**

Rank	Value	Ending Date
1	5.39	10/20/2003
2	4.78	11/2/1955
3	4.06	11/24/1990
4	4.03	11/6/2006
5	3.94	2/15/1970
6	3.77	12/9/1956
7	3.49	1/18/1986
8	3.32	1/1/2003
9	3.28	1/25/1971
10	3.26	2/19/1991

1.2 Geology

The underlying geology of Hoquiam in the flatter sections consists primarily of Quaternary Sediments of a non-glacial type. These are deposits from rivers, landslides, and coastal deposits. During varying geologic periods, this area alternated above and below sea level.

The hillsides consist of Upper Tertiary sedimentary rocks that accumulated over volcanic rock Oligocen and early Miocene Epochs. These hillsides have steadily eroded to their current heights.⁴

⁴ http://www.ecy.wa.gov/programs/eap/wsb/pdfs/WSB_30_Book.pdf

1.3 Topography

Hoquiam topography consists of broad, flat lowlands backdropped by steep hillsides. The lowlands were formed by historic tidelands and riverine floodplains from the mainstem Hoquiam River and its major lower tributaries, the Little, Little North Fork, and East Hoquiam Rivers. Levees are necessary for keeping high tides and storm surges from the Grays Harbor Estuary from inundating adjoining shoreline areas. The hillsides rise steeply to elevations of 300 to 500 feet.

Figure 2 **Topography**



1.4 Soils

There are thirteen soil types found within the City of Hoquiam that present varying degrees of suitability for development. Table 3 lists each soil type in the city, including the number of acres and percent of total acres. Figure 2 shows the location of each soil type.

Table 3 **Soil Types by acres and percent of total acres**

Soil	Number	Acres	Percent of Total Acres
Elochman silt loam	37	40.4	6.6%
Fluvaquents, tidal	39	65.9	10.8%
Hoquiam silt loam (8% to 30% slope)	46	21.2	3.5%
Hoquiam silt loam (30% to 65% slope)	47	32.5	5.3%
Katula very cobbly loam (30% to 65% slope)	58	1.4	0.2%
Le Bar silt loam (8% to 30% slope)	69	63.8	10.5%
Mopang silt loam (30% to 65% slope)	81	0.3	0.0%
Ocosta silty clay loam	104	59.2	9.7%
Rennie silty clay loam	125	1.8	0.3%
Udorthents	147	187.7	30.8%
Zenker silt loam (8% to 30% slope)	163	48.2	7.9%
Zenker silt loam (30% to 65% slope)	164	75.2	12.3%
Zenker silt loam (65% to 90% slope)	165	12.4	2.0%
Total Acreage		610	100%

The predominant soil in Hoquiam is Udorthents (147). Commonly found in the topographically flat areas of the city (0 to 2% grade), it covers approximately 187

acres in area. Udorthents are very deep, moderately well drained soils typical of diked tidelands. The main limitation for this soil is its wetness; the depth to the high water normally runs from 2 to 6 feet. Flooding and wetness can present severe building limitations for buildings, especially those with basements.

The hillsides in the city consist of soil types common to steeper slopes. West of the Hoquiam River, Zenker and Hoquiam silt loam soils cover the largest area. East of the river, the hillsides are a mix of Zenker and Elochman soils. All of these areas have development limitations related to slope; aerial photographs show that Zenker soils typically have remained forested and undeveloped. Erosion hazard and runoff potential is often severe on the steeper slopes. Road building can be difficult due to low strength capabilities of these soils.

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. Table 4 summarizes these characteristics for each soil type and Table 5 provides data from the National Resources Conservation Service regarding specific development constraints.⁵

⁵ While the soil survey data is actually oriented towards commercial forestry or agricultural use of the land, much of the information applies equally well to understanding how

Figure 3 Soils type locations

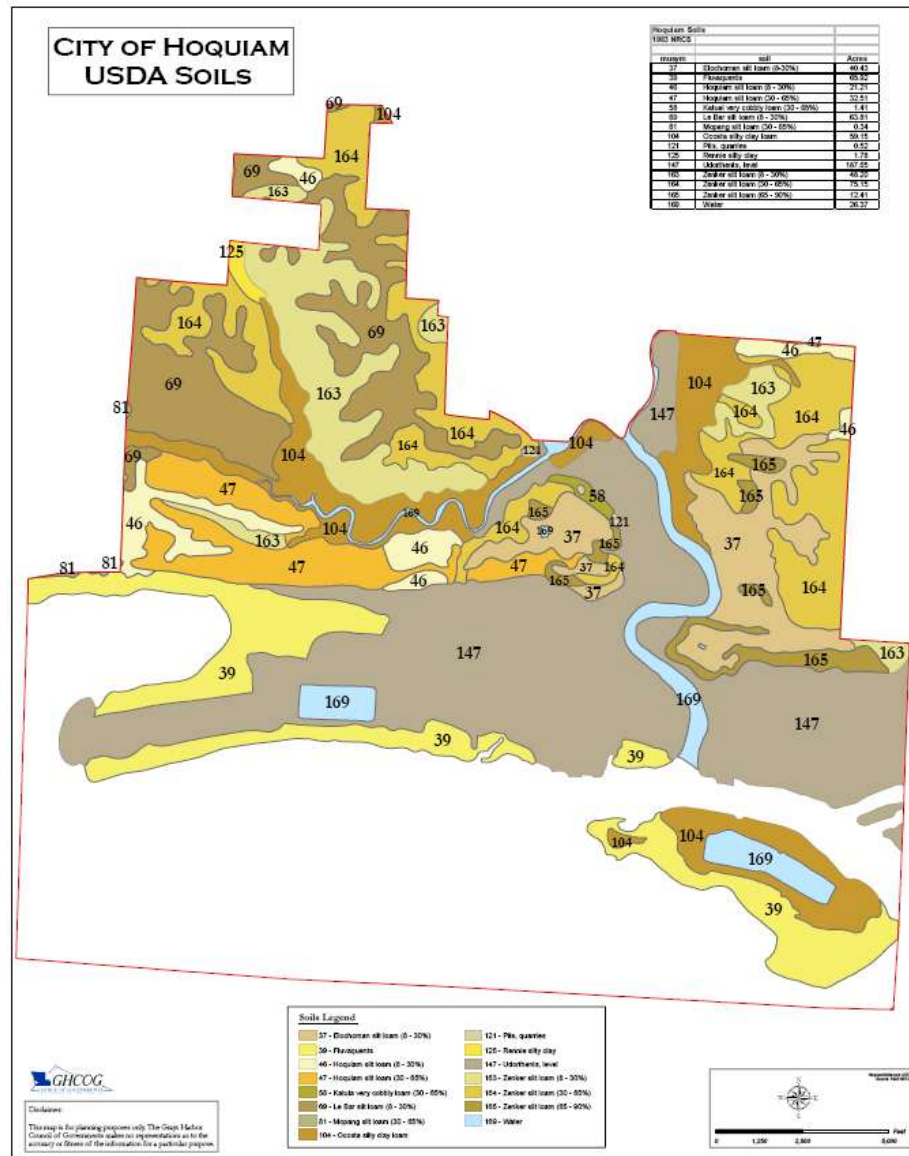


Table 4 Soil Characteristics for the City of Hoquiam

Soil Type	Map Number	Slope	Flooding	Dept to High Water Table (ft)	Depth to Bedrock (in)	Runoff	Erosion Hazard	Hydric
Elochman silt loam	37	8% - 30%	None	>6.0	>60	Slow	Slight	No
Fluvaquents, tidal	39		Frequent, very brief	0.0 - 1.0	>60	Very slow	None	Yes
Hoquiam silt loam	46	8% - 30%	None	>6.0	>60	Slow	Slight	No
Hoquiam silt loam	47	30% - 65%	None	>6.0	>60	Medium	Moderate	No
Katula very cobbly loam	58	65% - 90%	None	>6.0	20 - 40	Rapid	Severe	No
Lebar silt loam	69	8% - 30%	None	>6.0	>60	Slow	Slight	No
Lytell silt loam	74	30% - 65%	None	>6.0	40 - 60	Medium	Moderate	Yes
Ocosta silty clay loam	104		Rare	1.0 - 2.0	>60	Slow	Slight	Yes
Rennie silty clay loam	125		Frequent, brief	+1.0 - 0.5	>60	Very Slow	Slight	Yes
Udorthents, level	147		Rare	2.0 - 6.0	>60	Slow	Slight	No
Zenker silt loam	163	8% - 30%	None	>6.0	>60	Slow	Slight	No
Zenker silt loam	164	30% - 65%	None	>6.0	>60	Medium	Moderate	No
Zenker silt loam	165	65% - 90%	None	>6.0	>60	Rapid	Severe	No

Table 5 Building Site Development Characteristics

Soil Type	Map Number	Dwellings w/out Basements	Dwellings w/ Basements	Small Commercial Buildings	Local Roads & Streets	Septic Absorption Fields
Elochman silt loam	37	Severe: slope	Severe: slope	Severe: slope	Severe: low strength, slope	Severe: slope
Fluvaquents, tidal	39	Severe: flooding, wetness	Severe: flooding, wetness	Severe: flooding, wetness	Severe: wetness, flooding	Severe: flooding, wetness, percs slowly
Hoquiam silt loam	46	Severe: slope	Severe: slope	Severe: slope	Severe: low strength, slope	Severe: slope
Hoquiam silt loam	47	Severe: slope	Severe: slope	Severe: slope	Severe: low strength, slope	Severe: slope
Katula very cobbly loam	58	Severe: slope, large stones	Severe: slope, depth to rock, large stones	Severe: slope, large stones	Severe: slope, low strength, large stones	Severe: depth to rock, slope, large stones
Lebar silt loam	69	Severe: slope	Severe: slope	Severe: slope	Severe: low strength, slope	Severe: slope
Lytell silt loam	74	Severe: slope	Severe: slope	Severe: slope	Severe: low strength, slope	Severe: cemented pan, wetness, poor filter
Ocosta silty clay loam	104	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: flooding, wetness, shrink-swell	Severe: low strength, shrink-swell	Severe: wetness, percs slowly
Rennie silty clay loam	125	Severe: flooding, ponding, shrink-swell	Severe: flooding, ponding, shrink-swell	Severe: flooding, ponding, shrink-swell	Severe: low strength, shrink-swell, flooding	Severe: flooding, ponding, percs slowly
Udorthents, level	147	Severe: flooding	Severe: flooding, wetness	Severe: flooding	Moderate: wetness, flooding	Severe: wetness
Zenker silt loam	163	Severe: slope	Severe: slope	Severe: slope	Severe: low strength, slope	Severe: slope
Zenker silt loam	164	Severe: slope	Severe: slope	Severe: slope	Severe: low strength, slope	Severe: slope
Zenker silt loam	165	Severe: slope	Severe: slope	Severe: slope	Severe: low strength, slope	Severe: slope

These soil conditions can wholly or partially contribute to critical areas that include frequently flooded and geologically hazardous areas, aquifer recharge areas, and wetlands. Further discussion on critical areas begins on page.

1.5 Waterways

1.5.A Hoquiam River

The Hoquiam River drains an area of approximately 98 square miles. The mainstem Hoquiam River forms at the confluence of the West and Middle Forks at RM 7.1. The East Fork Hoquiam River joins at RM 2.5 and the Little Hoquiam River enters at RM 3.5. The State of Washington classifies the Hoquiam River from the mouth to the upper limits of tidal influence as Class B Waters.

The city straddles the lower five miles of the Hoquiam River downstream from the confluence with the East Fork. Once past the mouth of the Little Hoquiam, the river only once more abuts the city limits for a short distance at around RM 6.5.

The City of Hoquiam owns 7,500 acres of forestlands within the West Fork Hoquiam River subbasin for use as a municipal watershed. Diversion dams on Davis Creek and the West Fork Hoquiam River provide water storage for the municipal water system. The city restricts public access to this area to prevent contamination of the water supply.

Figure 4 City of Hoquiam Flood Zone



1.5.B Wetlands

The Federal Clean Water Act defines wetlands as “those areas inundated or saturated by surface or groundwater 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 the following areas when created from a non-wetland site:

- Canals
- Detention facilities
- Farm ponds
- Grass-lined swales
- Irrigation and drainage ditches
- Landscape amenities
- Wastewater treatment facilities

The Washington State Wetlands Identification Manual is the required criteria used to recognize wetlands and delineate their boundaries.⁶

⁶ RCW 36.70A.175 and WAC 173.22.080 mandates the use of the manual, which is consistent with the 1987 US Army Corps of Engineers wetlands delineation manual. A copy of the state manual is available at the following Internet site: <http://www.ecy.wa.gov/biblio/9694.html>

Wetlands within Hoquiam provide significant values and functions for the community as a whole and many private property owners. These values and functions involve:

- Protecting water quality by reducing stormwater runoff velocity; trapping sediments created by erosion; trapping toxic chemicals; removing excessive nutrients caused by fertilizers, pet feces, on-site sewage disposal systems.
- Providing flood protection by temporarily holding storm flows and slowly releasing them into waterways and the aquifers.
- Stabilizing shorelines and preventing erosion along the city's rivers by acting as a vegetative mat that keeps soils in place.
- Recharging aquifers, which is particularly important in providing moisture to natural vegetation and landscaping during dry periods.
- Protecting wildlife and fish habitat that provide a wide range of recreation activities.

The Hoquiam Wetland Inventory (1997) cataloged 725 acres of land-based wetlands within the pre-1999 annexation boundaries. The study revealed a greater number of wetland acres in the city than those delineated through the National Wetlands Inventory.⁷ The study further classified these wetlands into one of four classes (categories) under the Washington State Wetland Rating System.⁸ These classes with their associated acreage and definition include:

⁷ <http://wetlandsfws.er.usgs.gov/wtlnds/launch.html>

⁸ The 1997 inventory relied on the earlier 1993 edition; a new August 2004 version is available at <http://www.ecy.wa.gov/pubs/0406025.pdf>. Page 3 of the newest edition details the differences between the two.

Class I Wetlands – 50.01 Acres

Class I wetlands are those that: 1) represent a unique or rare wetland type; or 2) are more sensitive to disturbance than most wetlands; or 3) are relatively undisturbed and contain ecological attributes that are impossible to replace within a human lifetime; or 4) provide a high level of functions. These wetlands cannot afford the risk of any degradation because of their functions and values are too difficult to replace. Regionally, these wetlands are not common and make up a small percentage of the wetlands. Class I typically consist of estuarine wetlands, Natural Heritage Wetlands, bogs, mature and old growth forested wetlands, wetlands in coastal lagoons, and wetlands that perform many functions well.

Class II Wetlands – 540.81 Acres

Class II wetlands are difficult, though not impossible, to replace, and provide high levels of some functions. These wetlands occur more commonly than Category I wetlands, but still need a relatively high level of protection. Category II wetlands include estuarine wetlands, interdunal wetlands, and wetlands that perform functions well.

Class III Wetlands – 131.30 Acres

Class III wetlands are: 1) wetlands with a moderate level of functions; and 2) interdunal wetlands between 0.1 and 1 acre in size. These wetlands generally have been disturbed in some way and are often less diverse or more isolated from other natural resources in the landscape than Class II wetlands.

Class IV Wetlands – 1.73 Acres

Category IV wetlands have the lowest levels of function and are often heavily disturbed. This type of wetlands is the easiest to replace, and in some cases, be improved. These wetlands may provide some important functions and also deserve some level of protection.

Figure 4 is a map of wetlands inventoried through the National Wetlands Inventory. For more information on other potential wetland locations, consult the [Hoquiam Wetland Inventory](#).

1.5.C Grays Harbor Estuary

The Grays Harbor Estuary is perhaps the dominant water feature of the city. The city boundaries extend for approximately one mile into the estuary.

Much of the estuary in the city consists of an intertidal zone of relatively shallow depth. However, the North Channel is maintained by frequent dredging to a minimum depth of 30 feet MLLW. This is a critical marine commerce link to the Port of Grays Harbor and other commercial marine facilities at the mouth of the Chehalis River. The South Channel also provides marine access at shallower depths of 6 to 18 feet at low tide.

The North and South Channels merge past Rennie Island. Historically, the island served as an impoundment for storing effluent from the former ITT Paper Mill. The island is approximately 1 mile long and ½ mile wide.

1.5.D Groundwater

Limited data is available about groundwater within Hoquiam. An older Division of Water Resources bulletin (1966) indicates that well logs in Township 17N, Range 10W yield supplies of 26 to 70 gallons per minute at well depths of 79 to 200 feet. Further north in Township 18N, shallower well depths between 9 and 30 feet yields much smaller domestic supplies of 17 to 18 gallons per minute. Aquifers typically form in the alluvium deposits below the hills. Some exploratory drilling in Township 17N Range 10 Section 5 (around Grays Harbor City west of the city limits) produced 216 gallons per minute between 30 to 90 feet deep.

1.6 Fish and Wildlife

Despite being a city, the City of Hoquiam also contains significant areas of habitat critical to a rich array of aquatic and terrestrial species. Several types of environments within the city contribute to this biodiversity: fresh and saltwater wetlands, the Grays Harbor Estuary, rivers and creeks, and forested uplands.

1.6.A Terrestrial and Semi-Aquatic Species

The city is most noted as home to the Grays Harbor National Wildlife Refuge where 24 bird species use the site. The refuge, located in Bowerman Basin, is a critical stop on the migration route known as the Pacific Flyway. Other notable bird species located around the city include bald eagles, blue heron, peregrine falcons, and numerous species of waterfowl.

Extensive forestlands within the northern half of the city serve as habitat for large mammals such as deer, bear, cougar, and coyotes. A multitude of smaller mammals include raccoons, possum, and beaver. Local wetlands also provide critical habitat to amphibians. The Washington Biodiversity Project reports as many as 69 species of mammals, 27 species of reptiles and amphibians, and 151 species of birds are typical of this zone.⁹

1.6.B Aquatic Species

Both the Grays Harbor Estuary and the Hoquiam River subbasin support a very diverse range of salt- and freshwater species. Salmonids using the Hoquiam nearshore and

Fish and wildlife habitat conservation areas: Fish and wildlife habitat conservation means land management for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. This does not mean maintaining all individuals of all species at all times, but it does mean cooperative and coordinated land use planning is critically important among counties and cities in a region. In some cases, intergovernmental cooperation and coordination may show that it is sufficient to assure that a species will usually be found in certain regions across the state.

WAC 365-190-030(5)

⁹ http://www.biodiversity.wa.gov/ecoregions/nw_coast/nw_coast_biodiversity.html

freshwater systems include fall Chinook, chum, and coho salmon. Other salmonids include winter steelhead.¹⁰ Saltwater fish and invertebrate species abound.

2.0 Classification and Designation of Critical Areas

There are five critical areas identified in the Growth Management Act.¹¹ These include:

1. Wetlands
2. Areas with a critical recharging effect on aquifers used for potable water
3. Frequently flooded areas
4. Geologically hazardous areas
5. Fish and wildlife habitat conservation areas

Understanding where critical areas are within the city is important for two reasons:

- To preserve environmentally sensitive areas that are valuable to the public
- To protect people and property from threats created by natural hazards

¹⁰ See Salmonscape for species mapping at: <http://wdfw.wa.gov/mapping/salmonscape/index.html>

¹¹ RCW 36.70A.170 requires that all cities designate critical areas and those resource lands not already characterized by urban growth. "Designates" constitutes identifying what, and if possible, where, these lands are located within a jurisdiction. RCW 36.70A.060 requires cities to protect critical areas. [Chapter 365-190 of the Washington Administrative Code](#) provides the minimum guidelines for classification and designation of critical areas.

Areas that provide benefits to the community protect water quality, store and reduce flood and stormwater runoff, provide habitat for fish and wildlife, recharge groundwater, allow for erosion control, and offer us recreational opportunities. Knowing the location of other critical areas that create a threat to life minimize our exposure to floodwaters, landslides, earthquakes, and tsunamis.

2.1 Wetlands

The Hoquiam Wetlands Inventory lists and shows the locations of all designated wetlands within the pre-1999 boundaries of the City of Hoquiam. These wetlands conform to the definition mandated by [RCW 36.70A.030\(21\)](#). For those areas annexed into the city between 1999 and the present, the National Wetlands Inventory map shall generally show the location and shall be delineated using the Washington State Wetlands Identification Manual. Each wetland shall be evaluated for its functions and values according to the Washington State Wetland Rating System.

"Areas with a critical recharging effect on aquifers used for potable water are areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water."

WAC 365-190-030(2)

2.2 Areas with a critical recharging effect on aquifers for potable water

The City of Hoquiam relies on a surface water source for its potable municipal water supply located four miles north in the Davis Creek and West Fork Hoquiam River watersheds. There are no hydrogeologic studies completed specifically for determining where aquifer recharge points are within the city.

It is important to note, however, point and non-point recharge areas probably do exist and likely feed groundwater supplies that support shellfish resources in the estuary and habitat for anadromous fish species like salmon and steelhead. Both resources are important for the regional economy as well as contribute to the quality of life for community members.

Because aquifer recharge areas can become conduits for passing pollutants from the surface to groundwater, it is important to identify these areas for the purpose of protecting them by taking appropriate action to minimize potential contamination. Factors that create a critical recharge affect on aquifers include the nature of the vadose zone, the permeability of the soils, how clays and organic react with some chemicals, adsorption rates, hydraulic conductivity, gradient, groundwater flow direction, and groundwater flow rates.¹²

Typical recharge areas may include highly permeable soils, minimal distances to water table, and wetlands. Individual site analysis by a qualified geohydrologist may be necessary for land uses that have above- or below-ground storage tanks or utilize chemicals.

Frequently flooded areas are lands in the flood plain subject to a one percent or greater chance of flooding in any given year. These areas include, but are not limited to, streams, rivers, lakes, coastal areas, wetlands, and the like.

2.3 Frequently Flooded Areas

Although floodplains and other areas subject to flooding provide valuable hydrological functions for communities, they may also present a significant risk to people and property.

Naturally functioning floodplains accommodate and slow floodwaters from rivers and extreme tidal fluctuations. They also provide valuable habitat for fish and wildlife, particularly for salmon.

However, development in floodplains disrupts how they function. With less area to dissipate its energy, floodwaters can increase in velocity, causing severe erosion.

¹² For more information on the characteristics of critical recharge areas, see the following Guidance Document published by the Washington Department of Ecology at <http://www.ecy.wa.gov/pubs/0510028.pdf>

Development can also displace floodwaters to areas not previously subjected to inundation. Damage to private and public property can be extreme during flood events as well as jeopardize the health and safety of people.

Within the City of Hoquiam, frequently flooded areas are those designated within the 100-year flood plain designations by the Federal Emergency Management Agency and the National Flood Insurance Program. The map in Figure 5 shows the location of 100-year flood plain frequently flooded areas in Hoquiam.

The elevations delineated by the NFIP reflect their assumption that tidal flooding is a more significant threat to the community than riverine flooding. The NFIP calculated the following flooding recurrence intervals and heights based on historical tidal data:

Table 6 **Flooding Recurrence Intervals & Heights**

Interval	Flood Elevation above Mean Sea Level
10-Year	8.8 feet
50-Year	9.7 feet
100-year	10.0 feet
500-year	10.5 feet

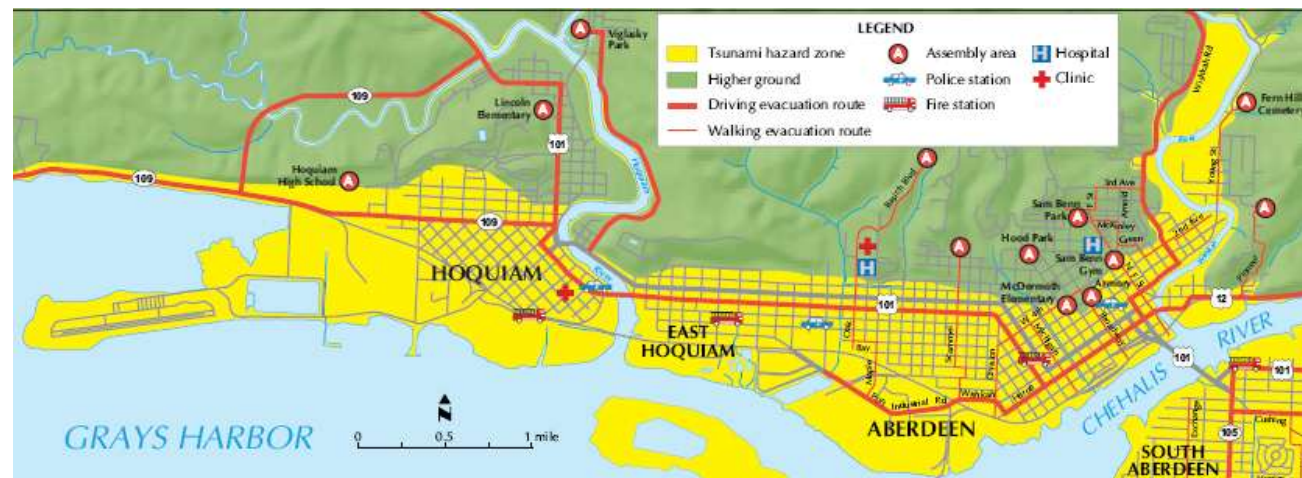
Hoquiam has not experienced serious flooding since December 1933, when an event caused by high rainfall, high tides, and 90-mile per hour winds flooded the current downtown area by 9.9 feet above mean sea level.

Figure 6 100-year floodplain



Tsunami hazard areas are frequently flooded areas as well. A tsunami is a series of waves most commonly caused by an earthquake beneath the sea floor. As they enter shallow water in the estuary, a tsunami can increase in height and cause great loss of life and property as they come ashore. Tsunami presents a severe threat to the coastal areas of Hoquiam. The Washington Emergency Management Division has mapped tsunami hazard zones for the city, as indicated in the yellow or light shaded areas in the map in Figure 6 below.

Figure 7 **Tsunami hazard zone**



There are three assembly points in the city deemed safe during a tsunami; these include Viglasky Park, Lincoln Elementary, and Hoquiam High School.

2.4 Geologically Hazardous Areas

Geologically hazardous areas include those sections of Hoquiam particularly vulnerable to erosion, sliding, and earthquake. While most occurrences happen naturally, development can increase both their frequency and the severity of their impact. They pose a particular threat to people and property when incompatible residential, commercial, industrial, or public improvements are within these areas.

Geologically hazardous areas include areas susceptible to erosion, sliding, earthquake, or other geological events. They pose a threat to the health and safety of citizens when incompatible commercial, residential, or industrial development is sited in areas of significant hazard. Some geological hazards can be reduced or mitigated by engineering, design, or modified construction or mining practices so that risks to health and safety are acceptable. When technology cannot reduce risks to acceptable levels, building in geologically hazardous areas is best avoided.

WAC 365-190-030(4)

Some geological hazards may reduce or mitigate the threat to people and property through engineering, design, or modified construction practices. There are situations, however, when technology cannot reduce risk to acceptable levels. In such cases, development should be avoided. Detailed risk assessments of individual sites by qualified experts are necessary to determine if such situations endanger individual properties.

Areas susceptible to one or more of the following types of hazards described below are geologically hazardous areas.

2.4.A Erosion hazard

These are areas identified by the NRCS as having a "severe" rill and interrill erosion hazard. Soils in an undisturbed state that have "severe" erosion rating include Katula very cobbly loam (58) and Zenker silt loam (165). Both of these soils have extremely high slopes of 65 to 85 percent. Soils in Hoquiam that have a "severe" or "very severe" rating for erosion hazard once 50 to 75 percent of the surface area becomes exposed include: Elochman silt loam (37), Hoquiam silt loam (46 and 47), Katula very cobbly

loam (58), Lebar silt loam (69), Lytell silt loam (74), and Zenker silt loam (164 and 165).¹³ The location of these soil types are found in Figure 2.

2.4.B Landslide hazard

Landslide hazard areas include areas potentially subject to landslides based on a combination of geologic, topographic, and hydrologic factors. They include any areas susceptible because of any combination of bedrock, soil, slope, slope aspect, structure, hydrology, or other factors. Examples may include, but are not limited to the following:

- Areas of historic failures and those areas delineated by the NRCS as having a "severe" limitation for building site development;
- Areas that have slopes steeper than fifteen percent; hillsides intersecting geologic contacts with a relatively permeable sediment overlying a relatively impermeable sediment or bedrock; and springs or ground water seepage;
- Areas that have shown movement during the holocene epoch (from ten thousand years ago to the present) or which are underlain or covered by mass wastage debris of that epoch;
- Slopes that are parallel or subparallel to planes of weakness (such as bedding planes, joint systems, and fault planes) in subsurface materials;
- Slopes having gradients steeper than eighty percent subject to rockfall during seismic shaking;

¹³ See <http://topsoil.nserl.purdue.edu/nserlweb/weppmain/overview/intro.html> for a discussion on erosion types.

- Areas potentially unstable as a result of rapid stream incision, stream bank erosion, and undercutting by wave action;
- Any area with a slope of forty percent or steeper and with a vertical relief of ten or more feet except areas composed of consolidated rock. A slope is delineated by establishing its toe and top and measured by averaging the inclination over at least ten feet of vertical relief.

Currently there are no geologic surveys available specifically for Hoquiam that map the location of these hazards; however, isolated occurrences and observations strongly indicate that these conditions are present. Site specific investigations by a qualified expert will be necessary to affirm the location of these hazards.

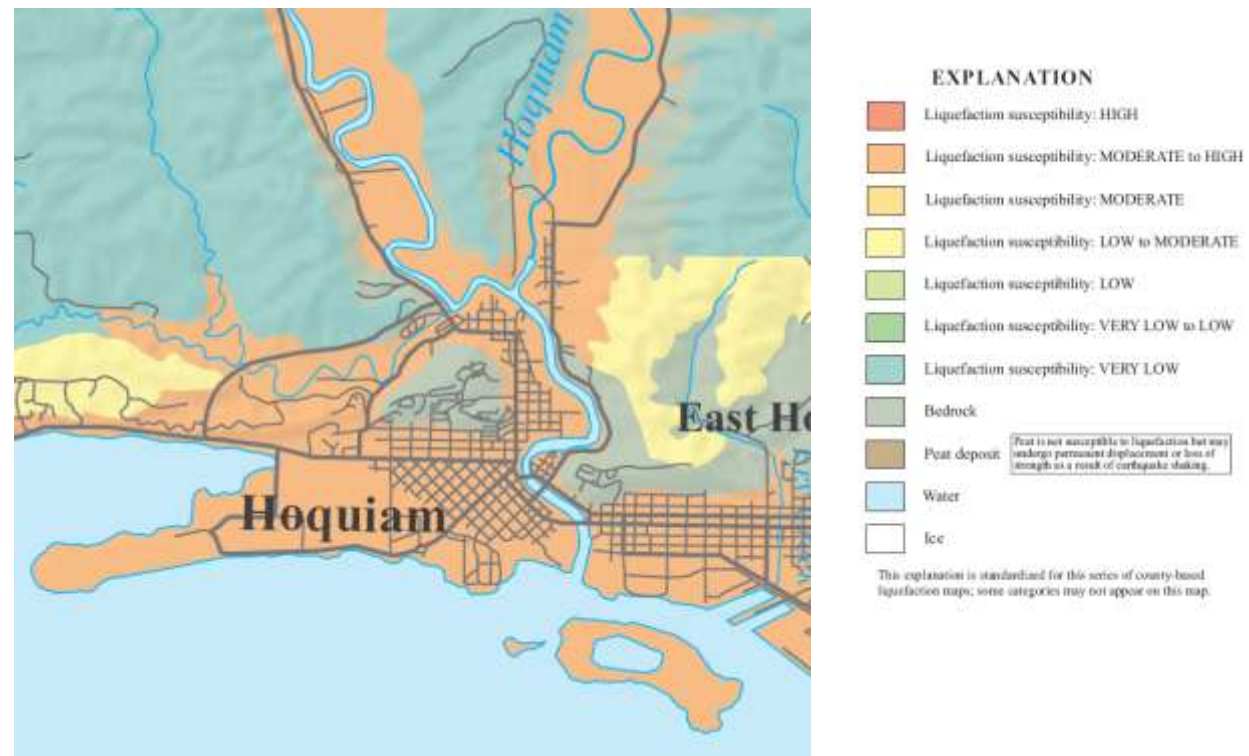
2.4.C Seismic hazard

Seismic hazard areas create a severe risk of property damage as a result of earthquake induced by ground shaking, slope failure, settlement, soil liquefaction, or surface faulting. The strength of ground shaking is primarily affected by the magnitude of an earthquake:

- Distance from the source of an earthquake;
- Type of thickness of geologic materials at the surface; and
- Type of subsurface geologic structure.

Ground failure happens during earthquakes and may result in surface faults, ground cracking, subsidence, liquefaction, and landslides. Liquefaction is a particular concern for Hoquiam, a condition existing with soils that lack cohesion and are of low density, typically in association with a shallow ground water table. Udorthents soils (147) are particularly vulnerable to liquefaction. Most of the developed areas of Hoquiam lie in a moderate to high liquefaction susceptibility zone, as seen in Figure 7.

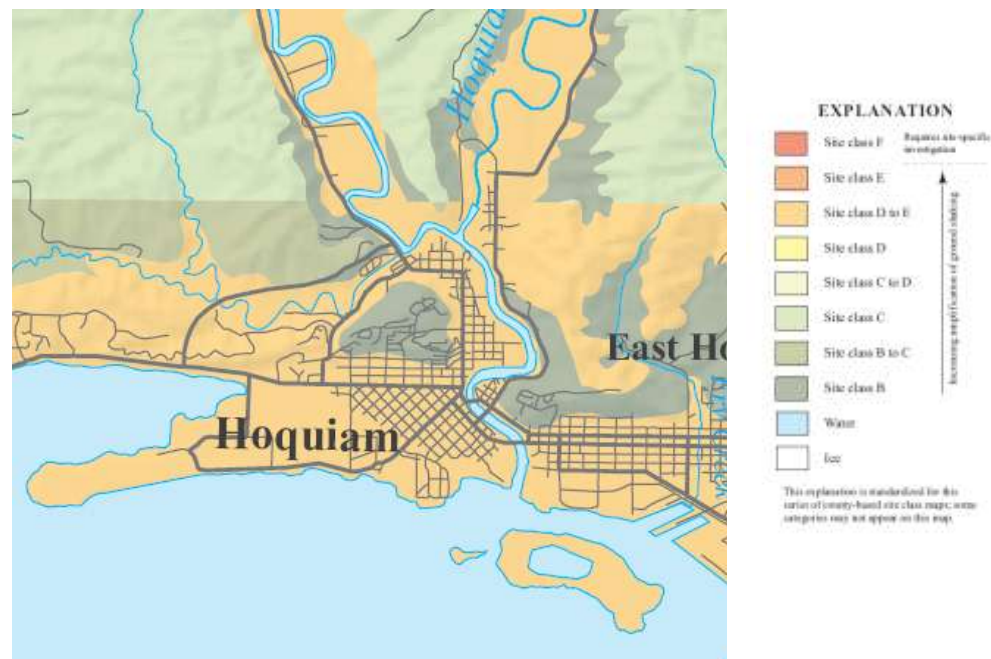
Figure 8 Liquefaction zones



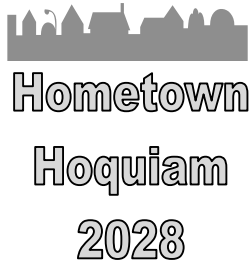
Similarly, the capacity of soft soils to amplify earthquakes has been mapped by the Department of Natural Resources. This map, shown in Figure 7, indicates that soils in the most heavily developed sections of the city lie in the D to E site class as defined by the Building Seismic Safety Council (1997). The average shear wave velocity in the

upper 100 feet will travel from 600 to 1200 feet/second in the D class and less than 600 feet/second in the E class. Ground shaking during an earthquake will generally be stronger as the number of feet/second decreases for shear wave velocity. Site class F is the most severe rating within this system.¹⁴

Figure 9 Susceptibility to earthquake damage by site class zones



¹⁴ For more detail information about site class and liquefaction, see the report [Liquefaction Susceptibility and Site Class Maps for Washington State](#) by Palmer et. al (2003).



Human Environment

3.1 Historical Development

The first known residents of modern day Hoquiam were members of the Lower Chehalis Tribe who had settlements at the mouth of the Hoquiam River. The name of the city, “Hoquiam”, is likely a Chehalis phrase meaning “hungry for wood,” a reflection of the large amount of driftwood that lined the banks of the river mouth.

European-Americans began arriving to the area in the 1850s to graze cattle on the tide flats of the Hoquiam River. The Karr Brothers were the first homesteaders to build permanent residences in what is today East and West Hoquiam. It was not until a decade later that other settlers began permanently homesteading within today’s city limits.

Because of its access to dense forestlands and fishing resources and location to waterways, Hoquiam soon became a center for sawmills, canneries, and ship building. As the economy and local population grew, the city formally incorporated in 1890. By the 1920s, the Grays Harbor County area became the largest lumber producing region in the world. Between the mid-1920s through the 1950s, pulp, paper, and plywood became major wood manufacturing enterprises as well.

However, steady economic and population growth became more cyclical starting with the Great Depression in 1929. The national economy in the 1970s delivered a significant blow to Hoquiam by decreasing national demand for forest products. The following decade population loss and unemployment resulted from the closing of the unfinished Satsop nuclear power plant in the early 1980s. The 1990s marked probably the hardest decade for the Hoquiam economy since the Great Depression. This period bore witness to a decline in the fishing industry, a reduction in the regional

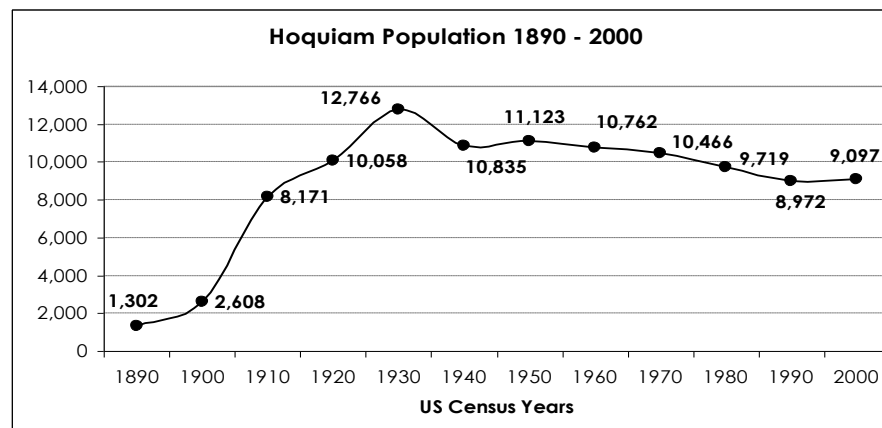
timber supply due to federal harvest restrictions on National Forest lands, and burgeoning competition from Pacific Rim countries in the wood products manufacturing market arena.

After hitting an unprecedented economic low, the Hoquiam economy is steadily making progress again due to large regional private investment in transshipping opportunities, sawmills, and bio-diesel production.¹⁵

3.2 Historic Population Trends

The first official census of the City of Hoquiam occurred in 1890 when the U.S. Census recorded a population of 1,302. The city's population reached its highest level in 1930 when it topped out at 12,766. Between 1930 and 1940, the population dropped by nearly 2,000 people. Despite a slight increase again in 1950, the population since that year mostly has shown a downward trend. The Office of Financial Management prepared a 2007 population estimate for the city showing 8,845 residents.

¹⁵ For more information about Hoquiam history, consult the following sources: <http://www.chehalistribe.org/index.html>, http://www.graysharbor.org/com_hoquiam.php, and http://www.sierrainstitute.us/neai/WA_case_studies/Hoquiam_WA.pdf

Figure 10 **Hoquiam Population, 1890 – 2000**

From 1890 to 2000, Hoquiam historically has averaged 18.6% of Grays Harbor County's population base. From 1980 to 2000, Hoquiam was 14.1% of the county base. During the 2000 Census, this average dropped to 13.5%. Population has been declining since 1960. The average growth rate for the city since 1980 has been a - 4.5%.

3.3 Future Population Projections

Population estimates are important to cities from a variety of planning facets. Because the state distributes many annual revenues on a per capita basis, population projections are an important financial planning tool. Population estimates are also useful in projecting land demand, such as determining how much land to set aside for different types of uses. Finally, they are equally important in estimating future infrastructure capacity needs, such as water and sewer systems, transportation networks, or schools.

The Office of Financial Management (OFM) prepares 25-year population trends for each county as part of their Growth Management Act (GMA) responsibilities.¹⁶ OFM responded to this mandate by preparing high, medium, and low projections. The state builds these projections using a complex mix of demographic and other statistical data. The OFM projections for Grays Harbor County follow in Table 15 on the next page. As of 2006, it appears that Grays Harbor County is on track with the high projection. OFM estimated the 2006 total county population at 70,400. However, it should be noted that most county growth is occurring in the City of Ocean Shores and the unincorporated areas of East County and North Beach.

Using the OFM population estimate as a base and assuming Hoquiam remains 14.1% of the total county population until 2025, Table 15 below shows that the city could expect a future population ranging from a low of 9,274 to a high of 12,516 people. Currently, Hoquiam appears to be following the low estimate, but current economic development opportunities within the city, if coupled with an increase in new housing construction, could easily move future population into the intermediate or high population projections.

¹⁶ Counties planning under the Act have the subsequent responsibility for apportioning future growth to urban growth areas (this includes cities and other areas with urban characteristics).
<http://www.ofm.wa.gov/pop/gma/default.asp>

Table 7 Future population estimates for Grays Harbor County & City of Hoquiam, 2000 - 2025

Grays Harbor County	2000	2005	2010	2015	2020	2025
High	67,194	70,064	74,216	79,027	83,931	88,763
Intermediate	67,194	66,490	68,878	71,761	74,605	77,269
Low	67,194	62,916	63,540	64,495	65,279	65,775
City of Hoquiam	2000	2005	2010	2015	2020	2025
High	9,474	9,879	10,464	11,143	11,834	12,516
Intermediate	9,474	9,375	9,712	10,118	10,519	10,895
Low	9,474	8,871	8,959	9,094	9,204	9,274

3.4 Community Demographics

Between the 1990 and 2000 US Census tabulations, the Hoquiam population has been undergoing a shift in demographics. The median age of residents rose from 34.6 years to 36.1 years. Age groups that increased slightly in size were those under 18 years, 18 to 24 years, and those 75 years and older. On the other hand, the age group of 45 to 74 shows a distinct decline. This trend likely reflects the out-migration of white working age people due to job losses and the in-migration of younger workers of Hispanic origin.¹⁷

¹⁷ Between the 1990/2000 US Census, the number of people of Hispanic origin increased from 177-523.

Table 8 **Age Groups: Number & percent of all people, 2000 US Census**

Age Group	Number	Percent
Under 18 years	2,491	27.4
18 to 24 years	785	8.6
25 to 44 years	2,424	26.6
45 to 54 years	1,211	13.3
55 to 64 years	793	8.7
65 to 74 years	593	6.5
75 to 84 years	549	6.0
85 years and over	251	2.8

Hoquiam became more racially diverse between the two Census tabulations as well. People of Hispanic origin grew in size from 2.0% to 5.7% of the total population. Asian and Pacific Islanders increased from less than 1% to 1.8%. Native Americans also grew from 3.5% to 5.8% of the total population.

Table 9 **Race: Number & percent of all people, 2000 US Census**

Race	Number	Percent
White	8,383	92.2
Black or African American	68	0.7
American Indian & Alaska Native	528	5.8
Asian	163	1.8
Native Hawaiian & Other Pacific Islander	43	0.5
Some Other Race	236	2.6

Other demographic statistics from the 2000 US Census follows below.

Table 10 **Household type: Number & Percent of total households, 2000 US Census**

Household Type	Number	Percent of Total Households
Total households ¹⁸	3,640	100.0
Family households	2,246	61.7
Female head of household, no husband present	536	14.7
Female head of household, no husband present with children under 18 years	414	11.4
Non-family households	1,394	40.8
Male householders living alone	479	13.2
Female householder living alone	672	18.5

¹⁸ A household includes all of the people who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room occupied (or if vacant, intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live separately from any other people in the building and that have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated people who share living quarters.

A family includes a householder and one or more other people living in the same household who are related to the householder by birth, marriage, or adoption. All people in a household who are related to the householder are regarded as members of his or her family. A household can contain only one family for purposes of census tabulations. Not all households contain families since a household may be a group of unrelated people or one person living alone. Families are classified by type as either a "married-couple family" or an "other family" according to the presence of a spouse.

Table 11 Household size: Number & Percent of all households, 2000 US Census

Household Size	Number	Percent of Total Households
Total Households	3,640	100.0
1-person households	1151	31.6
2-person households	1078	29.6
3-person households	559	15.4
4-person households	489	13.4
5-person households	233	6.4
6-person households	76	2.1
7- or more-person households	54	1.5
Average household size	2.47	(X)
Average family size	3.09	(X)

Table 12 **Income: Number of total, family & non-family households, 2000 US Census**

Income	Total Households	Family Households	Non-family Households
Less than \$10,000	493	70	333
\$10,000 to \$14,999	420	48	270
\$15,000 to \$14,999	256	38	133
\$20,000 to \$24,999	351	89	150
\$25,000 to \$29,999	309	127	93
\$30,000 to \$34,999	284	148	70
\$35,000 to \$39,999	243	145	52
\$40,000 to \$44,999	248	148	74
\$45,000 to \$49,999	203	118	51
\$50,000 to \$59,999	188	127	53
\$60,000 to \$74,999	314	216	68
\$75,000 to \$99,999	191	142	24
\$100,000 to \$124,999	68	62	0
\$125,000 to \$149,999	21	7	0
\$150,000 to \$199,999	0	0	0
\$200,000 or more	28	19	0
Median income	\$29,658	\$34,859	\$18,143
Mean income	\$38,877	\$45,940	\$23,847
County median income	\$34,160	\$39,709	\$27,890

3.5 Existing Land Uses

Early development patterns in Hoquiam reflected the highest and best use of the land at that time. Industrial and heavy commercial activities lined the waterfront to take advantage of flat land and shipping opportunities. The downtown formed west of the mouth of the Hoquiam River and behind the waterfront belt of industrial land. Overtime, commercial activities grew along main thoroughfares, especially as the automobile came predominately in use. Residences located further inland on both the flats and along the hillsides. Similar to many communities with large manufacturing areas, residences also abutted industrial areas. Older neighborhoods typically had a mix of residential types – single-family homes and apartments intermixed. Small businesses serving local needs were common.

Today, Hoquiam still reflects most of these historic development patterns, although industrial uses are less prevalent along the Hoquiam River.

The Grays Harbor County Assessor provides community data regarding how land is assessed for tax purposes. This information is useful in providing some understanding of the extent of land uses in Hoquiam.

The data tells us that forestlands make up the largest single land use in acreage within the city (35.4%), which is very unusual. Much of this acreage came into the city through a large 1999 annexation. Manufacturing uses are the next largest land use in total acreage (29.7%). Land used for residential purposes make up only 8.3% of all land uses. Typically in most cities, land used for residential purposes is the largest in total acreage. Table X provides data pertaining to the total acres, number of parcels, and median lot sizes.

Table 13 Land uses in the city of Hoquiam, Grays Harbor County Assessor, 2007

Land Use	Number of Parcels	Total Acres	Median Lot Size
Single family homes	2,632	471	5,800 SF
Duplex, triplex, & quads homes	91	15	6,000 SF
Apartments with 5 or more units	42	24	11,080 SF
Mobile home parks or courts	8	20	35,066 SF
Condominiums	39	5	10,705 SF
Hotels/institutional lodging	12	7	14,483 SF
All other residential not elsewhere coded (can include bare land platted & outside plats)	552	705	6,387 SF
Manufacturing	183	1,936	58 Acres
Trade and services	275	79	6,300 SF
Miscellaneous services	44	66	12,626 SF
Churches	25	9	9,920 SF
Recreational uses	14	56	46,206 SF
Forest lands	21	2,305	40 Acres
Transportation	88	431	9,107 SF
Communications & Utilities	27	165	5,000 SF
Undeveloped	12	224	10 Acres
Totals	4,065	6,518	

3.6 Transportation and Circulation

Transportation systems in Hoquiam include state highways, city streets, sidewalks, paths and trails, railways, and marine and air terminals.

3.6.A State Highways

The two state highways within the City of Hoquiam are SR 101 and 109. Both highways are under the jurisdiction of the Washington State Department of Transportation (WSDOT) and are part of the federal National Highways System, roads identified by the US Department of Transportation as important to the nation's economy, defense, and mobility. US 101 has been designated by the state as a Highway of Statewide Significance.

State Route 101



SR 101 enters the City of Hoquiam at MP 85.78 and leaves at MP 89.02 just beyond the junction with the SR 109 Spur.

SR 101 is a major transportation corridor within Hoquiam. Most of SR 101 consists of the Aberdeen/Hoquiam Couplet, a system of east-west one-way streets designed to facilitate traffic through the city. Sumner and Riverside Avenues form the westbound section of couplet. The eastbound section consists of one block of 5th Street and a large section of Simpson Avenue. Once over the Riverside Avenue Bridge, SR 101 veers north onto Lincoln Avenue and then jogs west and northwest on Perry Avenue.

The state designated SR 101 as a Class 4 highway. This classification allows 1 access only to contiguous parcels under same ownership.

SR 101 crosses the Hoquiam River twice with the Riverside Avenue and Simpson Avenue Bridges. The Simpson Avenue Bridge, officially listed as the Hoquiam River Bridge (WA-93) by WSDOT, is one of 29 historic bridges designated within the state. Built in 1928, WSDOT describes the bridge as "...an example of a patented double-leaf Strauss underneath counterweight bascule structure. The Strauss Bascule Bridge Company was one of the most important bridge building firms in the United States during the early twentieth century."¹⁹ WSDOT did major rebuilding of the bridge in 1948. The construction date for the Riverside Bridge was 1970.

Both bridges open for boat traffic. WSDOT 2005 records show that the Simpson Avenue Bridge averaged 11 openings monthly while the Riverside Avenue Bridge averaged 24 openings. The average duration of openings were six and seven minutes respectively.

The State of Washington Department of Transportation Annual Traffic Report for 2006 provides average daily traffic volumes for SR 101 in Hoquiam. Traffic patterns for the past four years show no increase.

¹⁹ <http://www.wsdot.wa.gov/Environment/CulRes/bridges.htm#HoquiamRiver>

Figure 11 City Streets and State Highways



Table 14 **Average Daily Traffic Volumes for SR 101, 2003-2006**

Milepost	Location	Average Daily Traffic Volume			
		2003	2004	2005	2006
85.78	After junction with Myrtle Street	13,000	13,000	13,000	13,000
87.21	Before junction with 16 th Street	14,000	14,000	14,000	14,000
87.40	At Hoquiam River Bridge	14,000	14,000	14,000	14,000
87.66	Before junction with SR 109	16,000	16,000	16,000	16,000
87.66	After junction with SR 109	13,000	13,000	13,000	13,000
88.23	After junction with Smith Avenue	7,900	7,500	7,600	7,600
89.02	Before junction with SR 109 Spur	5,400	5,000	5,000	5,000
89.02	After junction with SR 109 Spur	5,400	4,900	5,000	5,000

State Route 109

SR 109 is an offshoot of SR 101 that begins at the intersection of Lincoln and Emerson Avenues. It is the major state highway serving the City of Ocean Shores and the North Beach area.

The highway runs the full length of Emerson Avenue before exiting the city limits at approximately MP 2.0. SR 109 Spur, also known as Longren Pass, is a 1.82-mile roadway that connects SR 109 at MP 1.79 to SR 101 at MP 89.02. This spur receives little traffic. WSDOT designates SR 109 as a Class 5 highway from where it leaves 101 to the Hoquiam High School (allows more than one access point per parcel) and Class 2 from the Hoquiam High School to the 109 Spur (one access point for contiguous parcels unless greater than 1,320').

Table 15 **Average Daily Traffic Volumes for SR 109, 2003-2006**

Milepost	Location	Average Daily Traffic Volume			
		2003	2004	2005	2006
00.00	After junction with SR 101	5,500	5,100	5,300	5,300
00.14	Before junction SR 109 Couplet	5,400	4,900	5,200	5,200
00.14	After junction SR 109 Couplet		7,900	9,500	9,500
00.93	Before junction with Spencer Street	7,400	7,400	7,100	6,800
01.79	Before junction with SR 109 Spur			5,900	5,900
01.79	After junction with SR 109 Spur			6,500	6,600

Table 16 **Average Daily Traffic Volumes for SR 109 Spur, 2003-2006**

Milepost	Location	Average Daily Traffic Volume			
		2003	2004	2005	2006
01.79	After junction with SR 109	340	610	430	440

SR 101 Regional Circulation Project

The state funded the US 101 Circulation Project in the 2006 Legislative Session to address congestion issues along US 101 in the cities of Aberdeen, Cosmopolis, and Hoquiam. The project examined traffic circulation and identified opportunities to improve traffic flow and reduce delay while acknowledging the economic needs of the region.

The study recommends several key transportation improvements for Hoquiam. The centerpiece of the project is the proposed alignment of a new, four-lane roadway

that facilitates truck traffic through the industrial areas of Hoquiam and Aberdeen. The four segments of this route are:

Segment 1: Begins along SR 12 at the South Fleet Street intersection in Aberdeen, crossing over the Wishkah River on a new high fixed span bridge, completing the SR 101/12 interchange and continues along State Street.

Segment 2: Continues to a fairly direct connection from State Street to Wishkah Street at East Terminal Way, then connects to a new alignment along the railroad right-of-way, and then connects to Bay Avenue in Hoquiam.

Segment 3: Alignment follows Bay Avenue, crossing the Hoquiam River on a new high, fixed span bridge, continuing along a new alignment south of the railroad that connects to Earley Industrial Way and continues to 5th Street.

Segment 4: Alignment follows the 5th Street Extension and Airport Way to a new route north of Airport Way and west of Adams Street, continuing on the new alignment and connects to SR 109 east of Paulson Road, follows SR 109, and terminates at the SR 109 Spur junction.

Other elements of the project planned for Hoquiam include:

- Crosswalk improvements at Emerson and Spencer
- Intersection improvements at 7th and Simpson
- Improved signage and lighting on the Riverside Bridge
- Approach improvements on the Simpson Avenue Bridge

- Downtown access improvements on Lincoln and 6th Avenues
- Intelligent Transportation Systems (ITS) improvements that include variable message signs, closed circuit television, highway advisory radio, data stations, road/weather information systems, and photo detection cameras
- Port Industrial Way capacity, traffic flow, and safety improvements

3.6.B City Streets

Hoquiam has an extensive network of city streets that includes arterials, collectors, locals, and alleys. There are 49.31 miles of paved and .42 miles of gravel streets. Alleys are common within the city's older plats; approximately 15 miles of alleyways serving business properties remain unpaved.

Streets in areas of the city with flat topography have traditional grid patterns; those in the hillier sections are more curvilinear, following slope contours and varying in grade. Most rights-of-way are 60 feet in width; Simpson and Sumner Avenues are the exceptions at 80 feet in width.

Designated arterials in the city include:

- Sumner Avenue
- Riverside Avenue
- SR 101 North (Lincoln and Perry Streets)
- SR 109 (Emerson Avenue)
- SR 109 Spur (Longrenn's Pass)
- Endresen Avenue
- Simpson Avenue

- 8th Street
- Earley Industrial Way
- 5th St. Extension
- Adams St.
- Airport Way
- Paulson Rd.
- Bay Avenue
- Port Industrial Rd.
- Broadway Avenue

City streets in Hoquiam are primarily asphalt and are generally in good condition. Maintenance, however, is still important; periodic overlays are critical to keeping the streets in good working order.

Although sidewalks are common in most areas of the city, their condition varies widely. Many older sidewalks show significant drops (6 to 8 inches) and breakup. Areas of the city without sidewalks include Broadway until Division Street and parts of Endresen Avenue.

The Revised Code of Washington Chapter 35.77 requires cities to adopt annually a comprehensive transportation program plan for a six-year period. The improvement program must be consistent with comprehensive land use plans adopted pursuant to Chapter 35A.63. The Hoquiam City Council adopts a Six-Year Transportation Improvement Program after appropriate public comment. Table 10 below lists the improvement program adopted in June 2007.

Table 17 Six-Year Transportation Improvement Program, 2008-2013 by priority

	Project	Improvement	Cost (in \$000's)
1	Broadway bluff embankment stabilization	Relocation, reconstruction, and resurfacing (.13 mile)	\$ 2,075
2	Citywide pedestrian safety and improvement project	Sidewalk and ADA ramps throughout downtown Hoquiam on Lincoln, Simpson, 6 th , 7 th , & 8 th Streets (.5 mile)	\$ 723
3	North End truck route	Reconstruction and resurfacing portions of Eklund Wheeler, Monroe, Chenault	\$ 1,660
4	Pacific Avenue from 28 th to 30 th	Rebuild, install drainage, ballast, curb, gutter, sidewalk, and surfacing	\$ 500
5	28 th Street from Cherry St. to Queets Avenue	Minor widening and other enhancements	\$ 53
6	7 th Street from J to K Streets	Minor widening, resurface, street lighting	\$ 100
7	16 th Street from Riverside to Broadway	Grind, install street lights, conduit, repaving	\$ 200
8	Riverside Avenue from 20 th to 16 th Streets	Curb restoration	\$ 45
9	Polk Street from Chenault to Wheeler Avenues	Paving, curb and gutter improvements, repair railroad crossing	\$ 100
10	Emerson Avenue from Simpson Avenue to Spencer Street	Widening, curb and gutter, and resurfacing	\$ 50
11	28 th Street from Pacific to Simpson Avenues	Improve drainage and resurfacing	\$ 60
12	Ontario from Bay to Sumner Avenues	Repair surface and resurfacing	\$ 175
13	Endresen Road from Tennis Court to SR 101	Grading, drainage, curb, sidewalk, resurfacing	\$ 320

	Project	Improvement	Cost (in \$000's)
14	Endresen Road from Chenault Avenue to Tennis Court	New curbs and gutters, sidewalk, drainage	\$ 950
15	5 th Street Extension to 2 nd Street Extension	Construct new access routes, drainage, and lighting	\$ 80
16	North Street from Beacon to end of right-of-way	Turn around for Beacon Hill Drive	\$ 50
17	Beacon Hill Drive Cul-de-Sac from east end near Ontario	Extension of gravel road to end	\$ 45
18	Citywide alley upgrades	Alley paving, grading, and drainage	\$ 35
19	Levee Street from 10 th St. to Riverside Avenue	Improve railroad track and pavement interface	\$ 100
20	SR 109 along John Gable Park from park entrance to west end of park	Install culvert and trail on north side of roadway	\$ 260
21	Hoquiam Trail Phase I: Simpson Avenue from 8 th and Simpson to wastewater treatment plant	Construct pedestrian and bike trail	\$ 310

3.6.C Air Transportation Services

Bowerman Airfield, owned and operated by the Port of Grays Harbor, is located on Airport Way in the City of Hoquiam. The airport is located adjacent to the Grays Harbor National Wildlife Refuge and is the only jet-capable runway on the Washington coast.

Bowerman Airfield has the following runway facilities:

- Length: 5,000 feet (1,524 meters)
- Width: 150 feet (46 meters)



- Asphalt surface
- Full parallel taxiway, 50 feet (15 meters) wide
- Non-precision VOR or GPS approach with vertical guidance provided by visual approach slope indicators
- Four connecting taxiways
- Radio-activated (frequency) runway lights
- Unicom 122.7
- Automated weather: 360-538-7021 (radio frequency 135.77)

The current glideslope is at a 3° angle and runs from the runway towards Beacon Hill. The FAA will raise the glideslope to 3.5° in October 2009 to account for tree and antennae obstructions within the pathway.

There is a pilot's lounge at the airfield that operates 24 hours a day and Lana's Hangar Café serves breakfast, lunch and dinner.

3.6.D Marine Transportation Services

The Port of Grays Harbor owns and operates the only deep-water port on the West coast north of San Francisco within the lower 48 United States. It spans the north shore of the estuary from Hoquiam to Aberdeen. Port facilities include marine terminals supported by large, paved, secured cargo yards, the Port's own on-dock rail system,

and more than 104,000 square feet of on-dock covered storage²⁰. The federal government has designated the port as a Foreign Trade Zone (FTZ)

Terminal 1 operates as a barge terminal and is currently used for loading wood chips. There is an adjacent 23-acre storage area and 50,000 sq. ft. warehouse.

Berth depth of -30 feet (-9 meters) MLLW

- 480 feet long (146 meters)
- Apron width 50 feet (15 meters)
- On site rail

A partnership between the Port of Grays Harbor and AGP, terminal two is a state-of-the-art AGP processing bulk loading facility.

Terminal 2 operates as a bulk loading facility. The Port, in conjunction with Ag Processing Inc., a grower owned cooperative in the Midwest, developed the new state-of-the-art terminal.

Using the latest technology, the facility includes enclosed conveyers that transport product from the receiving building through a sampler and inline scales into the vessel.

Self scouring deepwater berth -41 feet (-12.5 meters) MLLW

- 600 feet long (183 meters)
-

- Apron width 100 feet (30.5 meters)
- 75 acres (30 hectares) paved, secured cargo yard and near dock warehousing

Terminal 3 is a 150-acre site with a deep-water marine terminal. It is available for sale or lease.

The Port recently installed on-site rail access for Puget Sound and Pacific Railroad traffic. It is less than a mile from a jet-certified airport. The site connects to Interstate 5 by a four-lane state highway.

Electrical service, natural gas, industrial water and wastewater treatment are all available. Deepwater berth -38 to -40 feet, requires yearly maintenance

- 600 feet long
- Apron width 120 feet
- 18 foot height
- 1 1/2 hours from deep water ocean



Terminal 4, located nearby in Aberdeen at Cow Point, is the Port's main general cargo terminal. It features over 104,000 sq. ft. of indoor storage space, on-dock rail access, and adjacent paved outdoor storage space. Self-scouring twin deep water berths with water depth at -41 feet (-12.5 meters) MLLW

- 1,400 feet long (427 meters)
- Apron width 100 feet (30.5 meters)
- On-dock rail and warehousing
- Rail loop servicing terminal can handle unit trains of cargo

3.6.E Railroad

Easy connection to rail transportation has been a priority at the Port of Grays Harbor²¹. An on-dock rail system with direct discharge options and four parallel spurs is available. A spur runs through the marine terminal complex providing a continuous rail loop to all three main cargo terminals. Cargo trains of 54 cars and longer can be continuously loaded or unloaded for movement through the Port's facilities. Another spur line runs north to Hoquiam Plywood with service two to three times per week. A switching yard is located east of the junction of Early Industrial Way and 8th Street.

The Puget Sound & Pacific Railroad, a division of RailAmerica, is headquartered in Elma, Washington²². The PS&P interchanges with the BNSF and the Union Pacific near Centralia, Washington. From there, the line reaches west to Grays Harbor, and northeast to Bangor, a total of nearly 80 miles.

The Puget Sound & Pacific operates seven days a week, with three or more trains a day. A typical train consists of 25-50 cars pulled by two locomotives. Train speeds in urban areas are 10 miles per hour. Common freight loads include grain, lumber, logs and chemicals for the pulp and paper mills. When the train reaches Aberdeen and Hoquiam each locomotive is used to work separate jobs. When the local jobs are completed the equipment is again combined into a single train for the return to Elma.

Maintenance facilities are located at Elma including a locomotive servicing pit and a mobile crane. A local fuel oil/diesel distributor refuels the locomotives at Elma.

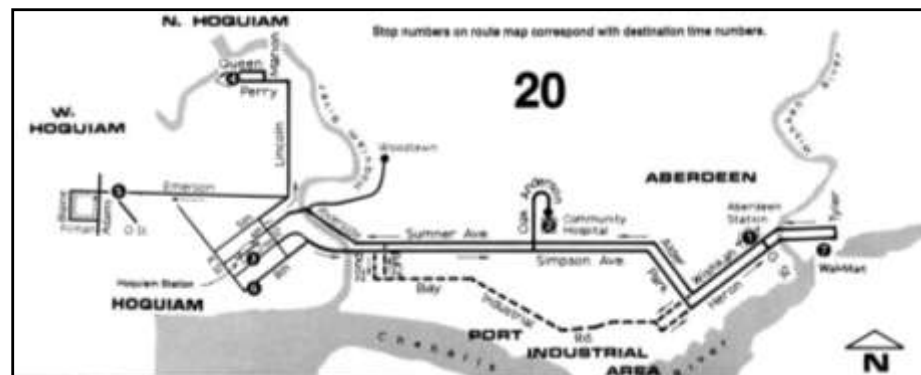
²¹ <http://www.portofgraysharbor.com/transportation/rail.html>

²² <http://www.cs.utk.edu/~davison/psp/>

3.6.F Public Transit

The Grays Harbor Transportation Authority (GHTA) provides regular public transportation services within the city limits. GHTA maintains a bus route that connects various points within the city with communities elsewhere in Grays Harbor County and Olympia. The Downtown Hoquiam Station at the corner of 7th and J Streets is a Major Urban Bus Connection Points for the system serving the North Coast communities and the Neilton-Lake Quinault Area. GHTA also provides paratransit services for the disabled for routes within the county and facilitates a vanpool service for commuters.

Figure 12 Hoquiam-Aberdeen GHTA routes



Paratransit Services, a nonprofit transportation company, also specializes in transportation for disabled or elderly people receiving medical coupons. Riders are able to use this service to connect to points beyond Grays Harbor County.

3.6.G Walking and Hiking Trails in Hoquiam

The City of Hoquiam has a combination of formal and informal paths, trails, and walking routes.

Hoquiam Walking Tour

A new walking tour along Hoquiam's waterfront points out landmarks from the city's days as a bustling mill town²³. The tour starts near the Farmer's Market on Riverside Avenue, travels over the Riverside Bridge, then runs from the Eighth Street landing to

²³ <http://www.ghphss.org/files/PDF%20Files/Moving%20Grays%20Harbor/Walking%20Trails%20Brochure.pdf>

Rayonier Point Park, behind the police station. Along the way the 11 historic signs each mark a famous place or event from Hoquiam's past. The signs themselves are works of art, incorporating vintage photographs, logos, business cards and quotes from diaries and contemporary newspapers to tell Hoquiam's story.

Bowerman Basin Sandpiper Trail (Grays Harbor National Wildlife Refuge)

Located at Hoquiam Airport, this trail offers great bird viewing along a boardwalk. Approximately 200 acres of tidal mudflat and small freshwater ponds can be found at Bowerman Basin. It is one of the most significant stop-over areas for migratory shorebirds from mid-April to mid-May (during which time restrooms are available).

Sunset Memorial Park

A popular walking area located off Grand Avenue in Hoquiam. This park features miles of paved loop roads with gradual inclines and declines and very limited traffic.

Elton Bennett Nature Walk

This nine-acre park is located in north central Hoquiam (next to Sunset Memorial Park) and provides a picturesque one-mile hiking trail and miles of rugged trails through the densely forested landscape.

The Polson Museum

The Polson is situated on a two acres park along the banks of the historic Hoquiam River and has a hillside trail and extensive gardens.

3.6.H Bicycling in Hoquiam

Roads around Hoquiam Airport

The roads are great for leisurely rides because there is very little traffic to contend with.

Longren Pass

(This is the 109 spur road between State Highways 109 and 101 northwest of Hoquiam). This has wide shoulders and limited traffic and requires a little more effort because there is an uphill component.

Highway 101 North of Hoquiam

This area has wide, paved shoulders for about 10 miles, making it conducive to bikers.

3.7 Public Services and Facilities

3.7.A Police Department

The Hoquiam Police Department currently has 19 full-time positions serving in Patrol, Administration, Corrections, and Investigations. There is also one animal control/code enforcement officer and one detective assigned to the Drug Task Force.

The Department handles approximately 14,000 incidents annually and maintains a minimum staffing level of one officer per 500 residents.

The patrol division provides 24-hour police protection 365 days per year with a staff of thirteen officers and one canine. Minimum staffing is two officers on duty at all times, except for three officers at night from 7 PM to 3 AM.

The Chief of Police, a lieutenant, and an administrative assistant make up the Administration Division.

The Corrections Division has a single Correction Officer serving the City Jail and transporting prisoners when that facility is closed.

Three detectives comprise the Investigations Division. These officers handle all Part I Crime investigation as well as other cases involving fraud, forgeries, and financial crimes. One of the detectives serves with the Drug Task Force.

The Animal Control/Code Enforcement Officer's main tasks are to enforce city and state laws regarding stray and dangerous animals and abating junked and abandoned vehicles.

The Hoquiam Police Department operates out of the station located at 215 Tenth Street. Vehicle inventory includes six patrol cars, one car for administrative use, two undercover detective vehicles, a jail van, and a Special Response Team vehicle the city shares with the Grays Harbor County Sheriff's Department.

3.7.B Fire Department

The Hoquiam Fire Department provides 24-hour fire protection and emergency medical services to the community. The staffing consists of 21 firefighters, 12 of who are qualified Paramedics and another nine are Basic and IV Emergency Medical Technicians.

The department receives an average of 243 fire-related and 2,312 emergency medical services-related calls annually (2001-2005). Property losses to fire have averaged \$179,932 from 2001 through 2005.

The department's major capital assets include two first line pumpers, one reserve pumper, one aerial apparatus, four ambulances, one rescue truck, one rescue boat, and one 100 kW generator. The fire station is located near City Hall at 625 8th Street.

In addition to firefighting and emergency medical services, the department provides inspection services, fire and life safety education, and abatement of structures at risk to fire.

Grays Harbor County Fire Districts 6, 10, 16, and 17 have contracts with the City of Hoquiam to provide them with emergency medical services. These fire districts cover approximately 400 square miles of unincorporated area within the county.

3.7.C Stormwater Collection

The existing stormwater collection system in Hoquiam protects the community from periodic flooding caused by high rainfall levels, high tides, and high river flows. The system relies on drainage pipes, open channels and ditches to convey water to pump stations that lift stormwater above levees and floodwalls into the Hoquiam River and the Grays Harbor Estuary. The city also depends on natural areas and wetlands for retaining and releasing stormwater. The city constructed the existing system between the late 1950's and early 1980's.

The *Comprehensive Surface Water Management Plan (2000)* identifies 17 drainage basins within the city.²⁴ There are nine pump stations distributed throughout the city capable of pumping 2,500 to 33,000 gallons per minute. Collection lines vary in size from 1-foot to as large as 6-feet in diameter. Several basins drain adequately by simple gravity pipes, ditches, and outfalls.

²⁴ The plan analyzes the city within its pre November 1999 boundaries.

System Deficiencies

The *Comprehensive Surface Water Management Plan* used the 10-year 24-hour storm event to evaluate the conveyance system and the 100-year 24-hour storm event to evaluate the pump stations. Computer modeling completed during the plan's preparation identified the following major deficiencies:

- Storm drainage pipes were inadequate to handle 10-year storm events in all of the city's basins except the 5th Street area;
- Outfalls at 8th and Ramer Streets do not have backflow preventers to keep the Hoquiam River from surcharging floodwaters behind levees;
- Emerson Avenue, Queen Street, and Bay Avenue pump stations are undersized for the 100-year storm events under full a build out scenario.

The plan also identified roadside washing of log trucks and bacteria loading from household pets as potential water quality issues directly related to the stormwater system.

The city has identified a series of priority capital projects to address stormwater system deficiencies. Improvements focus on structural as well as nonstructural programmatic improvements. Table 11 is a list of capital projects and their costs (2000 dollars).

Table 18 **Stormwater Collection Improvement Plan**

Structural & Nonstructural Improvement	Priority	Cost
Purchase 3,000 gpm trailer mounted pump with generator	High	\$50,000
Pump station improvements – Ramer Street outfall	High	\$360,000
Pump replacement program	High	\$190,000

Pump station improvements – K Street	Medium	\$1,245,000
Pump station improvements – 10 th Street	Medium	\$600,000
Pipe modifications – 8 th Street	Medium	\$154,000
Install hour-meters at 19 th , 20 th , 10 th , and Cottage Street stations	High	\$2,000
Adopt detention regulation for new development	High	--
Adopt stormwater manual (Department of Ecology)	High	\$1,000
Adopt design standards (WSDOT/APWA)	High	\$1,000
Inspect levees annually	Medium	\$1,000
Total Cost		\$2,604,000

3.7.D Water System

The City of Hoquiam operates a Group-A Municipal Water System that serves approximately 3,300 residential, commercial, government, and industrial connections. The city has owned and operated the system since 1930.

The city owns and maintains a 5,360-acre watershed north of the city within unincorporated Grays Harbor County that supplies surface water to its system. Raw water transmission lines connect surface waters drawn from reservoirs on Davis Creek and the West Fork Hoquiam River to the water treatment plant. These two sources are capable of producing up to 2.5 mgd for treatment during the historic 10-year, 7-day drought low flow rate.²⁵

The water treatment plant, built in 1987, is capable of producing 4.0 mgd. Because the quality of the source supply is so high, the plant typically only needs to remove silt, treat with a disinfectant, and make minor alkalinity and pH adjustments to meet the standards set under the Surface Water Treatment Rule of the Safe Drinking Water Act.

Once treated, drinking water enters a main transmission line that runs for approximately six miles to the College Hill Reservoir. This line has reached its 50-year design lifespan, is prone to leaks, and is the system's most vulnerable link.

The system relies on three reservoirs to provide operational, equalizing, standby, fire suppression, and dead storage. College Hill Reservoir is the largest with a capacity of 7.0 million gallons (mg). The Beacon Reservoir is 2.7 mg and there is a 0.18 mg steel tank in East Hoquiam.

²⁵ This flow rate is the standard used for evaluating source and treatment capacity.

The water system distribution network has slightly more than 58 miles of pipe of varying size and materials. The distribution system is capable of providing minimum pressures of 30 psi over most of the system during maximum day flow conditions. Pressures can be as high as 100 psi in some areas. Three booster pumps at Beacon Hill, College Hill, and Hoquiam Estates assist in distributing water supply to three pressure zones within the city.

There are two emergency interties between the Hoquiam and Aberdeen water systems, with one having a 500-gpm booster pump. Hoquiam has relied on the intertie periodically in past years to augment water supply during periods of heavy demand on the Beacon Hill Reservoir and major line breaks.

Current demand on the system averages 1.6 million gallons per day. Historic peak day demands occasionally have ran as high as 2.5 to 2.6 mgd, with historic peak average daily flows averaging around 2.0 mgd during weeks in July through October. However, peak demands at these levels have been decreasing in frequency over the past six years.

The top water users on the system are industrial, government, and multifamily/institutional accounts. Single-family homes units make up 85% of the metered accounts on the system. Multi-family units follow at 4%, industrial 9%, and government offices and facilities at 2%.

The current water system service area includes the city and some properties adjacent along the main transmission line from the water treatment plant to the northern city limits.

The *Water System Plan 2003 Update* evaluated the system for deficiencies and its capacity to handle future growth over a 25 year period ending in 2025. The plan considered expansion of the future service area to the Lundgren Pass vicinity and the

incorporated community of Grays Harbor City, but it did not analyze future development within the area of the city annexed after November 1999.

The plan estimates that future water use will rise from 2.9 mgd to 3.3 mgd maximum daily demand from 2007 and 2020. During this same period, the peak high demand will rise from 3,303 gpm to 3,722 gpm.

The size of the system's source, treatment capacity, transmission mains, and reservoirs are adequate to meet current demands and those until at least to 2013.

Beyond that date, a significant increase in demand may require the city to find alternative sources, especially to accommodate demand during drought periods. The city does have unused water rights to the North Fork of the Little Hoquiam River, but the water system plan recommends examining groundwater resources in the vicinity of the Little Hoquiam River or near the water treatment plant.

The age of the main transmission line from the water treatment plant to the College Hill Reservoir is a critical component that needs replacement as soon as possible. A second river crossing between East and West Hoquiam also is necessary to ensure redundancy. Growth in other areas of the future service area will likely require additional reservoirs and booster pumps.

3.7.E Solid Waste Collection

The City of Hoquiam presently contracts solid waste collection to Hometown Sanitation LLC. The company provides weekly garbage collection and bi-weekly recyclable collections for residential and commercial accounts. The company has used a private company for solid waste since May 2004.

3.7.F Waste Water Treatment and Collection System

The US Environmental Protection Agency classifies the Hoquiam Waste Water Treatment Plant (WWTP) as a major discharge facility. The WWTP is an activated sludge plant that has been operating since 1980. Originally, the system relied on a 48 acre facultative lagoon; today the lagoon is still in use for storing and digesting solids generated at the WWTP. The lagoon also serves as a raw wastewater storage facility in the event of high influent flows, power outage at the plant, and during annual or emergency maintenance situations.

The WWTP design is capable of handling a peak flow of 8 million gallons per day (MGD); however, the oxidation ditch aerator will not operate beyond a flow of 6.5 MGD, whereby overflow enters the lagoon for later treatment. Currently, the WWTP processes a monthly average of 0.75 to 3.25 MGD. Flows typically are at their highest from October through March, which may represent high infiltration and inflow of water into the system during the rainy season.

The only industrial wastewater treated by the WWTP is from the Ocean Gold fishmeal plant.

The collection system consists of nearly 40 miles of lines varying in size from as small as 2" to 24" in diameter. Most pipe 8" or less in diameter is PVC, with smaller amounts in ductile iron and ABS Composite material. Larger pipes, 10" and larger in diameter, are typically ductile iron or concrete/concrete lined. The largest mains are pressure lines in the West End leading out to the WWTP. The table below summarizes the pipe sizes by area.

Table 19 **Collection System by Area, Pipe Size and Length**

Area	Pipe Size											Total Length in Miles
	2"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	
Woodlawn		0.36		2.25	0.52			0.08				3.22
North End		0.02	0.62	5.94	0.57	0.37	0.58					8.11
West End			0.57	12.17	1.35	0.37	0.14	1.24	0.07	1.23	0.07	17.21
East Side	0.07		0.25	7.84	0.54	1.70	0.46		0.18			11.04
Total	0.07	0.38	1.44	28.21	2.99	2.44	1.18	1.33	0.26	1.23	0.07	39.58

The city currently is developing a Comprehensive Sewer Treatment and Collection System Plan. The anticipated completion date for the plan is 2008.

3.7.G Electrical Utilities

The Grays Harbor Public Utility District has two (2) distribution substations within the Hoquiam city limits. Both convert 69kV transmission line voltage to 7.2/12.47kV distribution system voltage. The Adams Street Substation was completed and energized this year (2007). It is located on the west side of Adams Street just north of the 5th Street Extension. The transformer is rated up to 25 MVA capacity. The Monroe Street Substation is located at the southeast corner of the Monroe and Chenault intersection. This substation has been in service for many years and improvements to the substation are planned within the next few years. The existing transformer is rated up to 12.5 MVA capacity. The District maintains substations outside the city limits that are capable of picking up loads within Hoquiam when necessary. They include substations located in Aberdeen at Electric Park and north of Hoquiam at Bernard Creek. With the addition of the Adams Street Substation, the District was able to remove its aging 7th and "N" and Grays Harbor City Substations from service.

The District provides electrical service to all homes and businesses within the City of Hoquiam. It provides and maintains all powerline infrastructure. The District provides and maintains "overhead" services to the mast and weatherhead on the structure. The customer provides and maintains the mast, the weatherhead, and the wiring from the weatherhead to the panel on "overhead" services. The connection point at the weatherhead for overhead service is the division of ownership location. The connection point for an underground service in the customer's panel is the division of ownership. The District provides and maintains "underground" service conductors up to the meter base at homes or businesses for panels rated up to 400 amperes. The customer provides and maintains underground service conductors out to a transformer, service enclosure or metering point for panels rated over 400 amperes. The District also provides an electric meter for all services. The customer provides and maintains the meter base.

Standard operating voltages are 115kV (to the Grays Harbor Paper mill), 69kV to distribution substations and to Willis Enterprises, 7.2/12.47kV four-wire grounded three-phase on the distribution system, 120/240 volt single phase service voltage to homes and small businesses, 102/208 volt and 277/480 volt three-phase services to commercial customers.

The majority of the District's system in Hoquiam is overhead. The area bounded by 6th and 10th Streets and Simpson Avenue and "K" Street (the former Urban Renewal area) is an underground distribution system. Also, the District's distribution system serving the police station vicinity and Bowerman Field are located underground. During the past two (2) years, the District completed a major improvement to the overhead system between Emerson Avenue and the Chehalis River and between Adams Street and the Hoquiam River. Improvements were also completed between the Monroe Street Substation and the area described.

The District does not currently operate and maintain any underground transmission lines within its 226-mile transmission system.

The District sees its peak demands for electricity between the hours of 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m. on weekdays. The peak demand is located throughout the city. The peak demand during the year normally occurs in January or February.

As mentioned, the District plans to improve the Monroe Street Substation in the next few years. Improvements will add capacity and improve system reliability and performance. The improvements will also improve the aesthetics of the substation. Also, as mentioned above, the District recently completed a major improvement to a large portion of the distribution system in the City during the past two (2) years. Other improvements over the next twenty (20) years would include possible conversion of the transmission system from 69kV to 115kV to meet load growth, replacement of aging sections of the District's transmission and distribution lines, additional system automation additions to improve system performance and the replacement of the underground distribution system serving Bowerman Field. Otherwise, the existing system is capable of serving current growth levels for the next twenty-years.

Additionally, the District designed a project a few years ago that would have made aesthetic improvements at the entrance to the Sunset Memorial Park Cemetery. We worked with city officials at the request of former Hoquiam City attorney Omar Parker to convert a portion of an overhead distribution powerline serving the cemetery to underground. The District was to provide materials and manpower to install new cables and other facilities. The City was to provide trenching and restoration work. The project was cancelled by the City as it was not able to fund the trenching and restoration work. We still have that project if the City becomes interested once again in its completion.

3.7.H Natural Gas: Cascade Natural Gas

Cascade Natural Gas provides natural gas to between 60 and 70 percent of the residents of the City of Hoquiam. Expansion of service is defined by the need for natural gas by the community being completely dependent on customer need.

3.7.I Telecommunications

CenturyTel, Verizon and Qwest supply fixed telephone needs. Cellular service is available through Verizon, Nextel, TMobile, Cingular and Qwest. High-speed internet access is available citywide. Local internet service providers include Techline, TSS, and GH Online.

Grays Harbor PUD also provides wholesale telecommunications through Northwest Open Access Network (NoaNet). NoaNet, a nonprofit company that has partnered with Grays Harbor PUD, has licensed public purpose fiber optic cables from the Bonneville Power Administration, making it possible to provide high-speed communications to the rural areas.

Comcast is another provider of cable television, high-speed internet (DSL), and digital telephone for Hoquiam.

3.7.J Hoquiam School District #28

The Hoquiam School District #28 provides pre-Kindergarten through Grade 12 education services to approximately 2,100 students.

The school district has four elementary schools; Emerson Elementary provides pre-Kindergarten through Grade 1 and Central, Lincoln, and Washington Elementary offer

Grades 2 through 6. Hoquiam Middle School serves Grades 7 and 8 and Hoquiam High School has Grade 9 through 12.

Table 20 **Hoquiam School District Enrollments, 2003 - 2006**

School / Enrollment by Year	2002	2003	2004	2005	2006
Emerson Elementary	240	309	274	314	268
Central Elementary	246	243	245	246	256
Lincoln Elementary	253	238	228	220	215
Washington Elementary	263	250	213	185	205
Total Elementary Enrollment	1,002	1,040	960	965	944
Hoquiam Middle School	387	386	363	367	348
Hoquiam High School	711	702	736	753	722
Total Enrollment	2,100	2,128	2,059	2,085	2,014

The Office of the Superintendent of Public Instruction (OSPI) projected enrollments out to 2012 for the Hoquiam School District. K-6 enrollments will rise to 977 students. However, Middle School enrollments will decline to 313 students and High School enrollment will decrease to 623 students.

OSPI also evaluates school facilities for future capacity. All but one of the six schools, Emerson Elementary, is adequate to handle anticipated student growth over the next five years. Table 13 lists each school and its established capacity

Table 21 **Capacity of School Facilities, Hoquiam School District**

School Facility	Building Square Feet	Projected Capacity
Emerson Elementary	27,176	264
Central Elementary	34,125	360
Lincoln Elementary	35,280	373
Washington Elementary	32,444	341
Hoquiam Middle School	64,019	532
Hoquiam High School	141,874	1,078

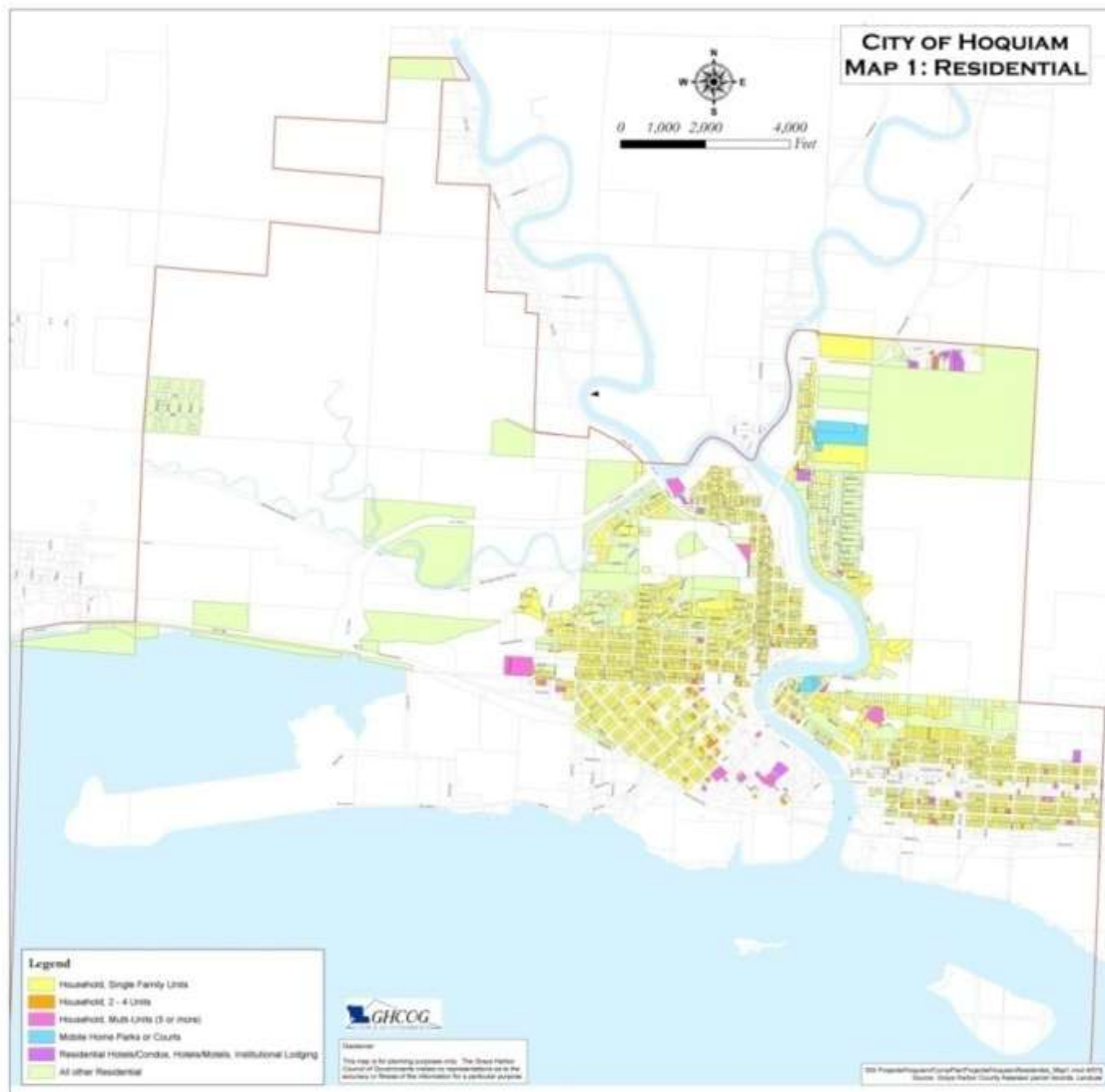
3.8 Housing

3.8.A Housing Types

Hoquiam has 3,971 housing units according to OFM estimates for 2006. Of this number 2,880 are single-family units, 930 are multi-family having two or more units, and 161 are manufactured homes or travel trailers.

Single-family homes make up a much higher percentage of all housing units in Hoquiam (72.5%) compared to the rest of the state's incorporated cities (60.0%). However, Hoquiam lacks the percentage of multi-family units (23.4%) compared to all Washington cities (36.1%). The number of manufactured homes/trailers roughly is the same in both (4.0%).

Figure 13 Residential land uses



3.8.B Housing Tenure

The 2000 US Census estimates that 57.3% of all housing units in Hoquiam are owner-occupied and 42.7% are renter-occupied. Homeownership in Hoquiam is declining; the 1990 US Census reported 61.1% of housing units were owner-occupied. Hoquiam is second only to Elma as having the lowest homeownership rate of all the cities and unincorporated areas of the county.

Owner-occupied homes have a higher number of people per household (2.50) than renter-occupied ones (2.42).

3.8.C Housing Age

The median year for single-family homes built in Hoquiam is 1921. Residential structures with two to four units and five or more units had median year construction dates of 1926 and 1959.²⁶ The 2000 US Census shows that Hoquiam has the largest percentage of housing built 1939 or earlier of any jurisdiction in Grays Harbor County. The city also ranks 25th as having the oldest 1939 and earlier housing stock out of 537 Census Designated Places in the state. Since 1980, there have been 87 single-family homes built, which comprise 3.3% of Hoquiam's total single-family housing stock.

3.8.D Housing Size

The median structure size of all single-family homes, regardless of age, was 1,403 square feet. For homes built 1990 and later, the median square footage rises to 1,512 square feet. The median lot size for all single-family dwellings was 5,800 square feet.

²⁶ Median year dates extracted from data provided by the Grays Harbor County Assessor's Office, April 2007.

The median lot size increases to 7,000 square feet for all homes constructed in 1990 or later.

3.8.E Housing Value

The median assessed value for all single-family home and lot was \$65,867 in 2007. Homes built 1990 and later have a median assessed value of \$105,794. The median annual taxes paid on a single-family home and lot was \$938.

3.8.F Current Residential Land Use

The Grays Harbor County Assessor inventories land uses with standardized coding as part of the property assessment process. According to their data as of April 2007, Hoquiam's residential land use codes show that residential uses comprise 8.3% of all land uses within the city. Of the 5,706 acres in the city, residential properties cover 1,247 acres.

Table 22 Residential Parcels, Total Acres, & Median Lot Size, Grays Harbor County Assessor (2007)

Land Use	Number of Parcels	Total Acres	Median Lot Size
Single family homes	2,632	471	5,800 SF
Duplex, triplex, & quads homes	91	15	6,000 SF
Apartments with 5 or more units	42	24	11,080 SF
Mobile home parks or courts	8	20	35,066 SF
Condominiums	39	5	10,705 SF
Hotels/institutional lodging	12	7	14,483 SF
All other residential not elsewhere coded (can include bare land platted & outside plats)	552	705	6,387 SF

As of 2007, Hoquiam currently has two residential zones. The Single-Family Residential (R-1) District covers 3,665 acres, or 64%, of the total city land mass. The General Residential (R-2) District, which allows a variety of multi-family residential uses, spans 711 acres, or 12% of the city.

3.8.G Projecting Future Housing Demand

Using the population projections, coupled with current demographic and housing statistics, it is possible to derive a rough estimate of future housing demand by the year 2025.²⁷ Table 22 provides a summary of the results of this exercise.

Table 23 **Summary of Projected Housing Needed by 2025**

Projection	Number of New People	Total Housing Units Needed	Number of Single-family Homes	Number of Multi-family Units	Number of Manufactured Homes
High	3,671	1,486	1,078	348	59
Medium	2,050	830	602	194	33
Low	429	174	126	41	7

Given the mean lot size of 5,800 square feet, the number of gross acres needed to accommodate future single-family growth will be 21 acres for the low projection, 100 acres for the medium projection, and 179 for the high projection.²⁸ Currently, there is adequate room within the existing city limits to accommodate this level of demand.

²⁷ This estimate assumes that current demographic and housing statistics will remain stable over the projection period.

²⁸ Gross acres are a calculation based on the number of housing units multiplied by the mean lot size (which provides net acres) increased by 25% to include public improvements, such as right-of-ways and other common infrastructure.

Future land demand for new multi-family units will probably be in the range of 16 to 20 dwelling units per net acres. For the low projection, the number of additional gross acres will vary from 2.05 to 3.2 acres. For the medium projection, the number of gross acres range from 12.1 to 15.2 acres. For the high estimate, the number of gross acres required will be from 21.8 to 27.2 acres.

3.9 Parks and Recreation Facilities

The City of Hoquiam has an extensive park system and a variety of recreation facilities for city and area residents. The City of Hoquiam Park and Recreation Comprehensive Plan: 2005-2009 provides goals, strategies, and a complete inventory of those lands and facilities owned by the city as well as other governmental and non-profit entities.

The city owns and maintains approximately 84 acres of parkland serving resident active and passive recreation needs. Each city neighborhood has access to one or more small parks typically containing playground and basketball and/or tennis courts. Larger community parks with a full complement of amenities are distributed throughout the city.

In addition to municipal parks, the Hoquiam School District #28 offers additional park facilities to the public. These facilities have large playfields for a variety of sports, covered outdoor facilities, and playground equipment. Also, the US Fish and Wildlife Service has the Grays Harbor National Wildlife Refuge in Bowerman Basin.

Table 23 has a complete inventory of publicly owned recreation sites within the City of Hoquiam.

Hoquiam residents also have available a wide range of regional parks and facilities operated by federal, state, and county agencies as well as nonprofit organizations.

The Parks and Recreation Plan establishes level of service standards for recreation uses. Given existing parks and recreation facilities, the plan identified the following potential deficiencies by 2010:

- 3.3 acres of community park
- 10.2 acres of neighborhood parks
- Additional urban pathways
- 1.8 acres of urban malls and squares
- 7 boat launches
- 35 picnic tables
- 2 playfields

Table 24 **Inventory of Recreation Sites within the City of Hoquiam**

Classification	Site Name	Ownership	Acreage
Community Parks	Elton Bennett Park	City	9.0
	John Gable Park	City	23.0
	Lion's Park	City	11.7
Neighborhood Parks	Beacon Hill Park	City	2.5
	Central Park	City	1.0
	Horne Park	City	0.1
	John Viglasky Park	City	0.1
	Pacific Avenue Park	City	0.1
	Richie Park	City	0.1

Classification	Site Name	Ownership	Acreage
School Sites	Central Elementary	HSD #28	1.4
	Emerson Elementary	HSD #28	8.0
	Lincoln Elementary	HSD #28	5.1
	Washington Elementary	HSD #28	3.3
	Hoquiam Middle School	HSD #28	4.8
	Hoquiam High School	HSD #28	12.6
Special Use Sites	Eighth Street Landing	City	0.2
	Hoquiam Rail Depot	City	0.1
	Little Hoquiam Boat Launch	City	1.0
	Olympic Stadium	City	9.0
	Polson Museum	City	2.5
	Port of Grays Harbor Viewing Tower	Port of Grays Harbor	0.5
	Sunset Memorial Cemetary/Park		33.0
Urban Pathways	Johnny Green Dike	City	0.1
	Rayonier Point	City	0.25
	Sunset Memorial Park	City	-
Urban Malls & Squares	Chevron's Veteran's Memorial	City	0.1
	Emerson Triangles (3 sites)	City	0.1
	Last Spur Park	City	0.4
Open Space	Grays Harbor National Wildlife Refuge	US Fish & Wildlife Service	1,800

GLOSSARY

Accessory Dwelling Unit: A second dwelling constructed within or separate to an existing single-family home, usually for use as a rental unit. An “accessory unit” is a separate dwelling, including kitchen, sleeping, and bathroom facilities. Also known as “in-law apartment.”

Affordable Housing: Affordable housing is generally defined as housing where the occupant is paying no more than 30 percent of gross income for housing costs, including utilities, and meets the needs of moderate or low-income households.

Aquifer recharge area: An area with a critical recharging effect on an aquifer that is vulnerable to contamination and is used as a sole source of potable water supply. Aquifer recharge areas are those areas designated pursuant to:

- The Federal Safe Drinking Water Act
- RCW 90.44, 90.48, and 90.54, and
- WAC 173-100 and 173-200.

Aquifers: Water-bearing strata of rock, gravel, or sand. These may vary in size from ground water resources of small quantity to enormous underground resources. The quantity of an aquifer is normally measured by well yields or by the water table height.

Arterial (Minor): A roadway providing movement along a significant traffic corridor. Minor arterials interconnect and augment the principal arterial system. Generally, traffic on minor arterials serves the immediate local community for short to moderate trip lengths. Traffic volumes are high, although usually not as great as those associated with principal arterials. Traffic speeds for minor arterials are similar to that of principal arterials.

Arterial (Principal): A roadway providing movement along a major traffic corridor. Principal arterials serve major urban and activity centers and access points to the freeway. They also serve as high traffic volume corridors that carry local cross-town trips and regional pass-through trips. Traffic volumes are higher, and trip lengths are longer than those usually associated with minor arterials.

Arterial, Minor: A right-of-way which serves as a distributor of traffic from a principal arterial to less important streets, directly to secondary traffic generators such as community shopping areas and high schools, and serves trips between neighborhoods within a community. Minor streets are more intensive than collectors, but less intensive than principal arterials.

Arterial, Principal: A right-of-way that connects regional arterial to major activity areas and directly to traffic designations. Principal arterials are the most intensive arterial classification, serve major traffic generators such as the Central Business District, major shopping and commercial districts, and move traffic from community to community.

Bicycle Lane: This facility provides separate lanes for each mode of travel. A bicycle lane is a clearly marked lane of travel on the side of a street or roadway, separated from the automobile lanes by painted strips, curbs or buttons.

Bicycle Path: This facility is physically separated from the roadway and its associated vehicular traffic. No motorized vehicles are permitted.

Block: The area formed by two facing block fronts bound on two sides by alley or rear property lines and on the other two sides by the centerline of platted streets, with no other intersecting streets intervening.

Buffer (General): Any structural, earth, or vegetative form located along a boundary for the purpose of minimizing impacts. Buffers may include, but are not limited to, vegetative berms, high shrubs, dense stands of trees, trellises, or fences.

Buffer (Sensitive Areas): The area immediately adjacent to wetlands and streams that protects these sensitive areas and provides essential habitat elements for fish and/or wildlife.

Building: Any structure having a roof intended to be used for shelter or enclosure of persons, plants, animals and property.

Business Districts: A type of commercial area that serves the regional market, as well as local community. These districts vary in uses and intensities and may include office, retail, restaurant, entertainment, housing, hotel, and service businesses.

Cluster Development: A development design technique that concentrates buildings in specific areas on a site to allow the remaining land to be used for recreation, common open space, and preservation of environmentally critical areas.

Collector Arterial: Roads that collect traffic from local access streets and convey it onto the arterial system. Collectors emphasize access to the surrounding area and de-emphasize mobility.

Collectors: A system of pipes that collect waste water via downhill flow from on-site plumbing to the public sewer.

Commercial: Includes retail, office services, entertainment, recreation and/or light industrial uses, depending on the location. Retail uses are those that provide goods and/or services directly to the consumer, including service uses not usually allowed within an office use. Commercial areas can range in size and function from small

residential markets serving the immediate neighborhood to regional draws, such as Totem Lake or Downtown.

Comprehensive Plan: A generalized coordinated policy statement of the governing body of the city that is adopted pursuant to the Optional Municipal Code, [Chapter 35A.63](#)..

Concurrency: A requirement that mandates and ensures that certain public infrastructures, such as transportation, water and sewer facilities needed to maintain adopted level of service standards (for arterials and transit routes), are available within six years of development. Concurrency is also a provision for assuring that improvements or strategies to accommodate the impacts of development are in place at the time of development or that a financial commitment is in place to complete the improvements of strategies within six years. A process of re-assessment, concurrency is a key link between land use, transportation, water and sewer and development approval.

Conditional Use Permit: An administrative process used to determine whether a conditional use should be allowed.

Conditional Use: Uses which may be permitted in an area if certain conditions are present, or if certain conditions are met.

Condominium: A building that the owner of one or more dwelling unit(s) is entitled to the exclusive right to share with other unit owners, the common areas and facilities governed by the Horizontal Property Regimes Act (RCW 64.32). Condominiums are equivalent to duplex and multi-family dwelling units.

Conflicting Uses: Uses or activities that are not in harmony when sited together.

Consistency: The requirement that subdivision regulations, zoning regulations and capital improvement programs be consistent with the comp plan and each of its elements, and that individual land use decisions also be consistent with the plan. The GMA requires that the Plan be both internally consistent and consistent with neighboring jurisdictions.

Contract Rezone: A rezone with conditions which are agreed to by the property owner.

Critical areas: Includes the following areas and ecosystems as defined in RCW 36.70A.030 and WAC 365-195-200:

- Wetlands;
- Areas with a critical recharging effect on aquifers used for potable water;
- Fish and wildlife habitat conservation areas;
- Frequently flooded areas; and,
- Geologically hazardous areas.

Density: The amount of an activity for a given area. Usually refers to the number of dwelling units per acre.

Density: The number of families, persons or housing units per unit of land usually expressed as “per acre.” There are several different ways of measuring density, including:

Detached Single Family House: A residential building containing not more than one dwelling unit entirely surrounded by open space on the same lot.

Development Regulations: Any controls placed on development or land use activities by a county or city, including, but not limited to, zoning ordinances, subdivision

ordinances, rezoning, building codes, sign regulations, binding site plan ordinances, or any other regulations controlling the development of land.

Development Standards: In respect to any development, fixed requirements or standards imposed by regulation or ordinance under land use and environmental planning legislations.

Development: The construction or exterior alteration of one or more structures, or a change in the type of intensity of land use, or the dividing of land, or any project of a permanent or temporary nature requiring land use modification.

Duplex: A single structure containing two dwelling units, either side by side or above one another.

Dwelling Unit: One or more rooms located within a structure, designed, arranged, occupied or intended to be occupied by not more than one family and permitted roomers and boarders, as living accommodations, independent from any other family. The existence of a food preparation area within the room or rooms shall be evidence of the existence of a dwelling unit.

Easement: A right or privilege that a person may have on another's land, such as the right-of way.

Facilities: Structural improvements which support the physical development of the City; as used here, it generally refers to municipal facilities which provides City services and/or supports the development of the City.

Family: An individual, or two (2) or more persons related by blood or marriage, or a group of not more than six (6) persons who are not related by blood or marriage.

Fee Simple Lots: Individually owned lots which fully contain the living structure and accessory structures such as garages.

Fish and wildlife habitat conservation area: land managed for maintaining species in suitable habitats within their natural geographic distribution so that isolated subpopulations are not created. This does not mean maintaining all individuals of all species at all times, but it does mean cooperative and coordinated land use planning is critically important among counties and cities in a region. In some cases, intergovernmental cooperation and coordination may show that it is sufficient to assure that a species will usually be found in certain regions across the state. Fish and wildlife habitat conservation areas include areas with which endangered, threatened, and sensitive species have a primary association; waters of the state; state natural area preserves and natural conservation areas; and streams and rivers planted with game fish by a governmental agency.

Floodway: The area that must be reserved in order to safely discharge the “one hundred year” flood. This area is specifically set forth by maps prepared under the National Flood Insurance Program (NFIP).

Frequently Flooded Areas: Frequently flooded areas are those lands which have a one percent or greater chance of flooding (being covered by water) in any given year. These areas include all areas designated as regulatory floodway and one hundred year floodplain by Federal Emergency Management Agency. In addition, those areas determined by Public Works to experience flooding, and areas classified as wetlands should be considered to be frequently flooded areas.

Goals: Goals are general statements of the desired long term future state towards which the Plan aims.

Geologically hazardous areas: areas that because of the susceptibility to erosion, sliding, earthquake, or other geological events, are not generally suited to locating commercial, residential, or industrial development consistent with public health or safety concerns. Geologically hazardous areas are characterized by slopes greater than 15% and known erosion, landslides, settling, rock slide, debris flow and/or seismic hazards as defined by the US Department of Agriculture Soil Conservation Service.

Greenspaces/Greenbelt: Areas either privately or publicly owned which the city has designated or targeted to be left in their natural state for protection; it includes undeveloped lands that are visually prominent, heavily wooded and vegetated areas, or other special environmental resource areas. These areas are intended to provide permanent buffers between incompatible land uses, prevent development of environmentally sensitive areas, and maintain areas of natural vegetation for wildlife habitat.

Gross Density: Units per gross site area before dedication, covenants or designation of a portion of the site as unbuildable or open space.

Gross Floor Area: The number of square feet of total floor area bounded by the inside surface of the exterior wall of the structure as measured at floor line.

Growth Management Act: Washington State House Bill 2929 which was adopted in 1990 and amended by House Bill 1025 in 1991. Codified under the Revised Code of Washington under [Chapter 36.70A](#) and [Chapter 36.70B](#).

Household: A nonprofit housekeeping unit consisting of any number of persons, which meets the Hoquiam Zoning Code definition of "Family."

Housing Type: Different types of residences. Examples are single family attached and detached; duplexes, triplexes, and townhouses; and low-rise, mid-rise and high-rise

multi-family apartments, condominiums, accessory dwelling units and manufactured housing.

Housing Unit: Any dwelling unit, housekeeping unit, guest room, dormitory, or single occupancy unit.

Impact Fee: Charges levied by the city against new developments for its prorated share of the capital costs of facilities necessitated by the development. The Growth Management Act authorizes imposition of impact fees on new development and sets the conditions under which they may be imposed.

Industrial Activities: The processing of a raw material into a finished product, especially by means of a large-scale industrial operation.

Infrastructure: The system of essential services, utilities, public and community facilities, e.g. water, sewage, power, roads, schools, health facilities, etc., which are necessary to enable urban development to function.

Intensity of Use: Refers to the manner in which land is used, zoned or planned. The more a site or area is developed and the busier its associated activities, the more intense the use becomes. The most intensive use of land is heavy industrial uses, with the least intensive use being open space. Generally refers to a hypothetical scale that places rural uses as least intense, proceeding through residential densities, commercial uses to industrial uses.

Land Trusts: A land trust is an organization created to own and steward land for sustaining long-term affordability (or other preservation goals, such as historical significance or agricultural value). The land trust organization leases development rights to individual or nonprofit organizations who agree to reasonable limitations on resale profits while maintaining basic owner equity and tenure rights.

Manufactured Housing: A dwelling on one or more chassis for towing to the point of use and designed to be used with a permanent foundation as a residence on a year around basis and which bears an insignia issued by a state or federal regulatory agency indicating that the mobile manufactured home complies with all applicable construction standards. A recreational vehicle is not a mobile/manufactured home.

Mixed Use: The presence of more than one category of use in a structure; for example, a mixture of residential units and offices in the same building.

Multifamily Use: A structure or portion of a structure containing three or more dwelling units.

Net Site Density: Units per net residential, commercial or industrial development site area.

Objectives: Objectives are statements of the desired short-term and more measurable aims of the Plan; the objectives should show how a goal shall be pursued.

Open Space: Land and/or water area with its surface open to the sky or predominantly undeveloped, which is set aside to serve the purposes of providing park and recreation opportunities, conserving valuable resources, and structuring urban development and form. There are four types of open space:

- *Private Open Space:* Usable outdoor space directly accessible to a unit whose use is restricted to the occupants of that unit.
- *Common Open Space:* Space that may be used by all occupants of a residential complex. Parking areas and driveways do not qualify as open space.
- *Usable Open Space:* Usable open space is an outdoor area that is of approximate size, shape and siting to provide for recreational activity. Usable open space may be occupied by sculpture, fountains or pools, benches or

other outdoor furnishings, or by recreational facilities such as playground equipment, swimming pools, game courts, etc.

- *Landscaped Open Space*: An outdoor area including natural or planted vegetation in the form of hardy trees, shrubs, grass, evergreen ground cover and/or flowers.

Performance Standards: A regulatory approach which accents the manner in which a proposed use affects adjacent uses and property, and the manner in which a use is conducted. It is usually distinguished from more traditional zoning which separates use by type, rather than how a particular use is carried out.

Performance-Based Zoning and Building Codes: As opposed to traditional prescriptive techniques, this system measures individual projects against clearly stated criteria, such as traffic impacts, neighborhood compatibility, infrastructure capacity, etc. Its main advantage is its flexibility, and that developers are given a wider range of methods by that to meet housing demand.

Policies: Policies are a definite course or method of action to guide and determine present and future decisions, both legislative and administrative.

Public Facilities: Include streets, roads, highways, sidewalks, street and road lighting systems, traffic signals, domestic water systems, storm and sanitary sewer systems, parks and recreational facilities, fire stations, libraries, and schools. These physical structures are owned or operated by a public entity that provides or supports a public service.

Public Services: Include fire protection and suppression, emergency medical services, law enforcement, public health, library, solid waste, education, recreation, environmental protection, and other governmental services.

Public Uses: Generally refers to uses or land owned or operated by governmental agencies.

Semi-Public Uses: Refers to uses that serve public or general community needs of a non-business or non-profit character; but are not conducted by governmental entities. Includes religious uses.

Single-Family Unit: A detached structure containing one dwelling unit and having a permanent foundation.

Special Needs Housing: This category refers to housing that is provided for low income or indigent persons and where applicable, their dependents who, by virtue of disability or other personal factors, face serious impediments to independent living and who require special assistance and services in order to sustain appropriate housing on a permanent, long term or transitional basis.

Species of concern: Species of Concern in Washington include those species listed as State Endangered, State Threatened, State Sensitive, or State Candidate, as well as species listed or proposed for listing by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service. See WAC 232-12-297 for further definition.

Spot Zoning: Technically this term refers to a rezone that is not in accord with the Comprehensive Plan. More common use of the term refers to rezoning property in a manner differently than adjacent sites. In this Plan it refers only to this latter use of the term in order to indicate in what circumstances zoning a property differently than adjacent sites would or would not be appropriate (generally appropriate as a transitional device to gradually rezone an area from a old designation to a new designation under this Plan). This use of the term in this manner is intended only to communicate such situations and is not intended to alter the legal meaning of the term.

Stormwater: Water that is generated by rainfall and is often routed into drain systems in order to prevent flooding.

Townhouse: A form of ground-related housing where individual dwelling units are attached along at least one common wall to at least one other dwelling unit. Each dwelling unit occupies space from the ground to the roof and has direct access to private open space. Also referred to as “single family attached” housing.

Transition: Refers to a change in use, either over time or through space; or both.

Treatment Plant: Facility that provides either primary or secondary treatment of wastewater prior to discharge into a receiving water.

Wetland or wetlands: 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, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from nonwetland areas created to mitigate conversion of wetlands.

Bibliography

Tetra Tech/KCM. City of Hoquiam Comprehensive Surface Water Management Plan. Seattle, WA: Tetra Tech/KCM, July 2000.

City of Hoquiam. Hoquiam Fire Department 2005 Annual Report. 2005.

City of Hoquiam. Hoquiam Police Department, Hoquiam Police Department 2006 Annual Report, 2007. http://cityofhoquiam.com/city_reports/hpd/HPD_20061.pdf

Grays Harbor Council of Governments. City of Hoquiam Comprehensive Park and Recreation Plan: 2005 – 2009. 2005.

Parametrix. City of Hoquiam Water System Plan: 2003 Update. Seattle, WA: Parametrix, May 2003.

School Projected Enrollment:

<http://www.k12.wa.us/SchFacilities/CohortProjections.aspx>

Office of Superintendent of Public Instruction, School Enrollment:

<http://www.k12.wa.us/DataAdmin/default.aspx>

Office of Superintendent of Public Instruction, School Inventory Reports:

<http://www.k12.wa.us/SchFacilities/InventoryReports.aspx>

Soil Conservation Service. United States Department of Agriculture. Soil Survey of Grays Harbor County Area, Pacific County, and Wahkiakum County, Washington, 1986.

- Eddy, Paul A. Preliminary Investigation of the Geology and Ground-Water Resources of the Lower Chehalis River Valley and Adjacent Areas, Grays Harbor, Washington. Division of Water Resources, Department of Conservation, 1966.
- City of Hoquiam, Hoquiam Wetland Inventory, 1997.
- US Fish and Wildlife Service, National Wetlands Inventory Maps.
- Washington State Wetlands Identification and Delineation Manual, Washington Department of Ecology, 1997, Publication #96-94.
- Washington State Wetland Rating System for Western Washington, Washington Department of Ecology, 2004, #04-06-025.
- Wetland Mitigation in Washington State, Parts 1 and 2, 2006, publication numbers 06-06-011a and 06-06-011b
- Wetlands in Washington State, Volumes 1 and 2, 2005, Publications #05-06-006 and 05-06-008
- Geologic Map of the South Half of the Shelton and South Half of the Copalis Beach Quadrangles, Washington, Washington Division of Geology and Earth Resources, 1987
- Smith PhD., Carol and Wenger, Mark, Salmon and Steelhead Habitat Limiting Factors, Water Resource Inventory Areas 22 and 23, Washington State Conservation Commission, 2001.
- Kliem, John, The Chehalis Basin Salmon Habitat Restoration and Preservation Work Plan for WRIAs 22 and 23, Chehalis Basin Partnership, 2007.

- Washington Biodiversity Project,
http://www.biodiversity.wa.gov/ecoregions/nw_coast/nw_coast_biodiversity.html
- Salmonscape, <http://wdfw.wa.gov/mapping/salmonscape/index.html>
- Office of Financial Management, 2007 Population Trends, October 2007.
- American Fact Finder (US Census data),
http://factfinder.census.gov/home/saff/main.html?_lang=en
- Washington Department of Transportation, 2006 Annual Traffic Report,
http://www.wsdot.wa.gov/mapsdata/tdo/PDF_and_ZIP_Files/Annual_Traffic_Report_2006.pdf
- Washington Department of Transportation, Historic Bridges,
<http://www.wsdot.wa.gov/Environment/CulRes/bridges.htm#HoquiamRiver>
- Washington Department of Transportation, State Highway Log, Planning Report 2006,
http://www.wsdot.wa.gov/mapsdata/tdo/PDF_and_ZIP_Files/HwyLog2006.pdf
- Washington Department of Transportation, US 101 Regional Circulation Project Meeting Materials,
<http://www.wsdot.wa.gov/planning/Studies/US101/Aberdeen/MeetingMaterials.htm>
- Washington State Department of Transportation, Aberdeen-Hoquiam-Cosmopolis Functional Classification Map,
<http://www.wsdot.wa.gov/mapsdata/tdo/FunctionalClassMaps/PDF/FCAberdeenUA.pdf>
- City of Hoquiam, Six-Year Transportation Improvement Program, 2008-2013

Washington State Department of Transportation, Washington State Airport Reference Guide, <http://www.wsdot.wa.gov/aviation/PilotsGuide/default.htm>

Port of Grays Harbor, <http://www.portofgraysharbor.com/>

Grays Harbor Transit, <http://www.ghtransit.com/>