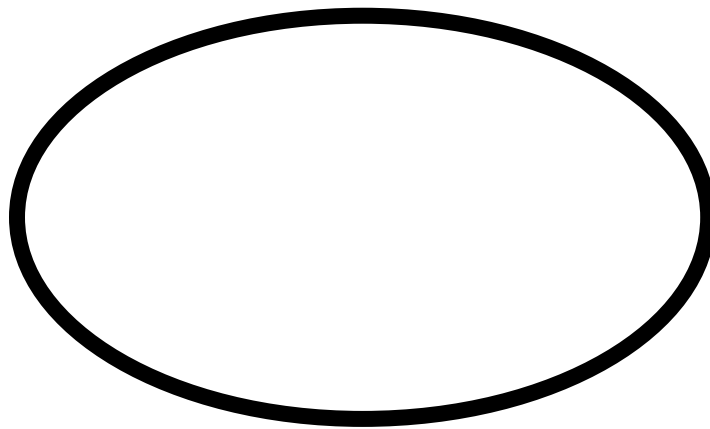


**Birch Bay**  
**COMMUNITY PLAN**  
**Whatcom County**

**Birch Bay**  
**Community Plan Steering Committee**



**Prepared by:**  
**Kask Consulting, Inc.**  
**Seattle**

**Whatcom County Council**  
**Adopted**  
**September 28, 2004**  
Revised May 2009

**Birch Bay  
COMMUNITY PLAN  
Whatcom County**

**Birch Bay  
Community Plan Steering Committee**  
4550 Birch Bay - Lynden Road, PMB F28  
Birch Bay, WA 98230  
[bbay.plan@verizon.net](mailto:bbay.plan@verizon.net)

**Whatcom County  
Planning & Development Services**  
5280 Northwest Drive  
Bellingham, WA 98226  
Phone: 360 676-6907  
Fax: 360 738-2493  
[sgoodwin@co.whatcom.wa.us](mailto:sgoodwin@co.whatcom.wa.us)

**Stakeholders**  
Birch Bay Chamber of Commerce  
Blaine School District  
Brown and Cole Stores  
British Petroleum - Cherry Point  
Port of Bellingham  
Trillium Corporation  
Washington State Department of Ecology  
Whatcom County Fire District No. 7  
Whatcom County Fire District No. 13  
Whatcom County Planning & Development Services  
Williams Energy

**Kask Consulting, Inc.**  
Urban Development & Management Services  
World Trade Center Seattle  
2200 Alaskan Way, Suite 470  
Seattle, WA 98121  
Phone: 206 275-0140  
Fax: 206 275-0146  
[kaskinc@aol.com](mailto:kaskinc@aol.com)

**Whatcom County Council  
Adopted September 28, 2004**

# **Birch Bay Community Plan Steering Committee**

**Meg Grable, Chair**  
**Kathy Berg, Vice Chair**

## **Point Whitehorn Neighborhood**

Dave Determan  
Gary Peterson  
Mark Lawrence (Alternate)

## **Hillsdale Neighborhood**

Lori Edmonds  
Don Graham  
Nora Atwood (Alternate)

## **Terrell Creek Neighborhood**

Linda Tucker  
Mike Abendhoff  
Mike Ross (Alternate)

## **Cottonwood Reach Neighborhood**

Carol Sandvig  
Claudia Hollod  
Doralee Booth (Alternate)

## **State Park Reach Neighborhood**

Cathy Cleveland  
Ted Morris  
Roselyn Gosch (Alternate)

## **Birch Bay Village Reach Neighborhood**

Mike Kent  
Jack Venett  
Larry Larson (Alternate)

## **Central Uplands Neighborhood**

Steve Nelson  
Douglas Robertson  
Shelly Varner (Alternate)

## **Birch Point Neighborhood**

Arne Aaxen  
Bob Libolt  
Barbara Skudlarick (Alternate)

## **Central Reaches Neighborhood**

Patrick Alesse  
Bill Grant  
(Alternates)  
Candice Haws (2/01 – 4/01)  
Sharon Roy (5/01 1/02)  
(current position open)

## **West Cherry Point**

James Mars

# **Subcommittees of the Steering Committee**

## **Scope of Work and Budget**

Meg Grable  
Kathy Berg  
Steve Nelson  
Douglas Robertson  
Patrick Alesse  
Mike Kent  
Sylvia Goodwin

## **Beautification**

Carol Sandvig  
Jack Venett  
Dave Determan  
Linda Tucker  
Bill Grant  
Mark Lawrence  
Kathy Berg

## **Traffic and Safety**

Claudia Hollod  
Doralee Booth  
Cathy Cleveland  
Linda Tucker  
Meg Grable  
Kathy Berg

## **Business**

Pat Alesse  
Bill Grant  
Mark Lawrence  
Kathy Berg



## **Community Plan Stakeholders**

Nick Jerns, Jr.	Birch Bay Changer of Commerce
Dr. Gordon L. Dolman	Blaine School District
Craig Cole	Brown and Cole Stores
Mike Abendhoff	British Petroleum - Cherry Point
Steve Jilk	Port of Bellingham
Bob Libolt	Trillium Corporation
Barry Wenger	Department of Ecology
Hal Hart	Whatcom County
Chief Gary Russell	Fire District No. 7
Chief Mike Campbell	Fire District No. 13
James Mars	Williams Energy

## **Management and Technical Oversight**

Sylvia Goodwin, AICP, Whatcom County Planning and  
Development Services

## **Consultants**

Mart Kask, AICP, PE  
Kask Consulting, Inc.

John Patrick Milliken  
Randell Perry  
James Wiggins  
James E. Zervas, AIA  
David McNeal, AIA

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## Chapter 1

# FORWARD

The Birch Bay Community Plan is a method of deciding between the available choices, and bringing about the sorts of changes Birch Bay area residents want. The plan rests on the belief that it is wise to look ahead, foresee change, and take charge of the future. It covers decisions regarding Birch Bay's growth that are best made in common. These decisions include the following planning concerns: the overall land use pattern, how to serve the area with adequate housing, community facilities, roads, and public utilities (sewer, and water), and how to protect natural resources, including critical areas and the shoreline. Within this overall guide, there is still much room for individual discretion.

This Community Plan is designed to satisfy the Washington Growth Management Act and to consider Whatcom County-Wide Planning Policies. It is the result and the product of local residents, having been forged over many public meetings, and is the expression of the popular will. The Community Plan is organized as follows:

- Summary - Birch Bay Community Plan
- Planning Process
- Community Profile
- Vision, Goals and Policies
- Shorelines and Shorelands
- Critical Areas
- Land Use
- Housing
- Utilities
- Transportation
- Parks and Recreation
- Economic Development
- Public Education
- Public Health and Safety
- Governance
- Capital Facilities
- Siting Essential Public Facilities

This Community Plan will guide zoning decisions, subdivision actions, capital improvements decisions, shoreline development and other legal actions that shape the physical community. These legal instruments are required to implement this plan.

## **Chapter 2**

# **SUMMARY BIRCH BAY COMMUNITY PLAN**

## **Introduction**

The Birch Bay Community Plan is a comprehensive plan prepared specifically for the Birch Bay Community or sub-area of Whatcom County. The Plan has been prepared under the direction of a citizen based steering committee with two representatives each from ten neighborhoods. The boundaries of the neighborhoods and the Birch Bay Community planning area are shown in Figure 3-3 in Chapter Three, entitled Planning Process. The Community Plan has been prepared in accordance with the Washington State Growth Management Act, the Shoreline Management Act, the State Environmental Policy Act and the Whatcom County-wide Planning Policies. The Community Plan represents an integration of a desired community vision with the requirements set forth in the above named State laws and County-wide planning policies. The Birch Bay Community Plan is an expression of a vision and, more specifically, a statement of public policy on how the Birch Bay Community should grow and accommodate growth.

## **Vision Statement**

**Preamble.** The Vision Statement is a verbal snapshot of Birch Bay Community in the year 2020. It summarizes the desired character and characteristics of the Community and provides the ultimate goal for all of the Community planning and development efforts. The vision statement is intended to be realistic, yet is more than a mere prediction. Rather than describing the features of the Birch Bay Community, as they are likely to be, it expresses what the Community would like Birch Bay to become and believes it can achieve. It acknowledges past and current trends in the Birch Bay Community's relationship to external factors, but also assumes an ability to shape the future in a positive way. The Vision Statement, therefore, is optimistic; affirming and enhancing the best of the Community's past and existing attributes and aspiring for those it now lacks but hopes to have.

**We the People of Birch Bay.** We the people of Birch Bay hereby set forth a vision statement and pledge our commitment to achieve a common vision



## SUMMARY - BIRCH BAY COMMUNITY PLAN

for the future of the Birch Bay Community. We the people of Birch Bay have identified a set of central values which we as a Community hold in common:

- We believe that the essence of a prosperous and vibrant Community is found not in its structures but in the collective spirit of those who live and work within the Community. We hold that the built aspects of a community - its transportation network, utility system, buildings and other facilities - should not be considered ends in themselves, but as means for enhancing the quality of life and enriching the human spirit.
- We respect the picturesque setting of Birch Bay and believe that any development along its shores must achieve harmony between this natural and man-made environment.
- We believe that certain controls on the choices of individual action are appropriate to ensure that the Community's best interests are realized.
- We believe that human activities should be considered as one component of a complex system of relationships among living things and their environment and that we have a responsibility to ourselves and to future generations to seek a mutually supportive balance within this system.

### **Birch Bay, a Residential, Recreational, Resort Community.**

Birch Bay in 2020 is an attractive, vibrant, and inviting Community in which to live, work and vacation. The Community has maintained a balance between residential development and tourism related activities. Our neighborhoods are secure and stable, creating the foundation for our quality of life. They also have variety both in population and land use. People from all economic, age and ethnic groups live here. New businesses and high-tech industries have moved into our Community, providing shopping and employment opportunities for our residents. Serving the tourist population continues to be one of the primary economic activities of the Community. Tourism that was primarily a summer phenomenon is now occurring year round. Recreational vehicle parks continue to be popular, particularly during the summertime. The commercial area of the shoreline has become a blend of successful gift shops, art galleries and restaurants, some of which combine first floor commerce with upper story residences and/or office spaces. In addition, the shoreline supports hotel and condominium housing which have been carefully located to protect views and provide on-site open spaces to soften the visual impact of building size.

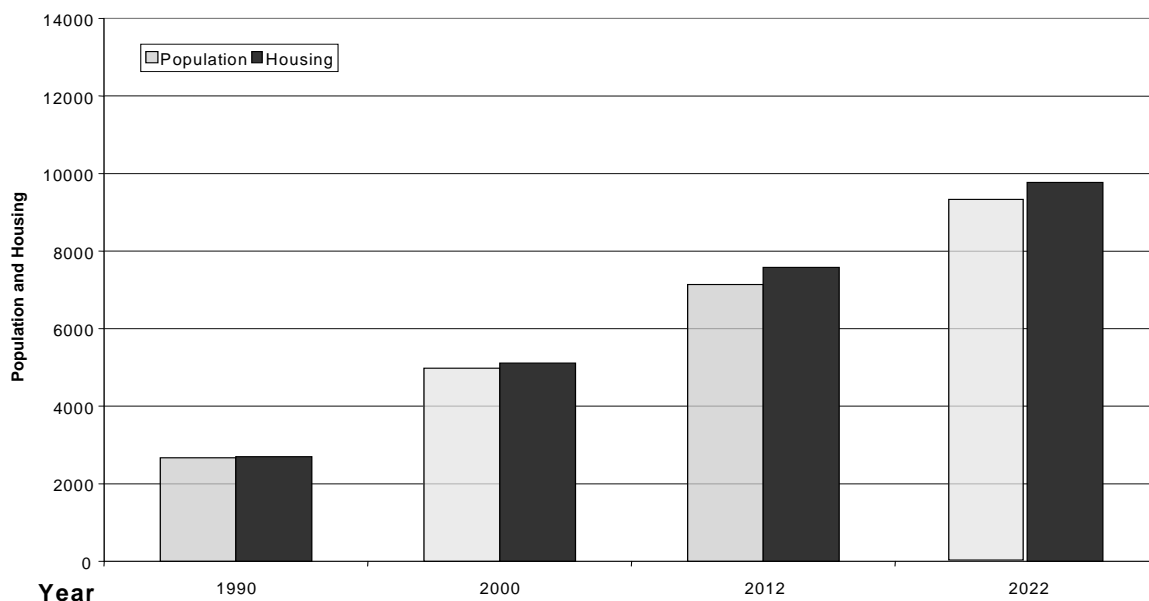
## Population and Housing

According to the year 2000 US Census, the Birch Bay designated census place population grew from 2,656 persons in 1990 to 4,961 persons in 2000, an increase of 87 percent or 2,305 persons. During the same time period, the number of housing units grew from 2,699 housing units in 1990 to 5,105 housing units in 2000, an increase of 89 percent or 2,406 housing units. The 2000 U.S. Census reports that 51% of the housing units in Birch Bay were for seasonal, recreational or occasional use. Birch Bay's resort and recreation character contributes to a condition where the number of housing units exceeds its population count.

Population of the Birch Bay Community is forecasted to grow to 9,619 persons in 2022, while its housing unit count is forecast to grow to 4,128 full time housing units. In addition to the full-time housing units, a need for 4,128 housing units, time-share condos or RV spaces is projected to accommodate seasonal residents. The single family to multi-family housing unit mix is forecast to grow from 87/13 in 2000 to 80/20 in 2022, resulting in 3,302 full-time single family housing units, 825 full-time multi-family housing units, and 4,128 seasonal recreational units or RV spaces. In terms of growth, the Birch Bay Community needs to accommodate an additional 1,383 full-time single family housing units, an additional 345 full-time multi-family housing units, and approximately 1,728 additional seasonal or recreational units or RV spaces.

Population and housing unit growth from 1990 to 2022 is shown in Figure 2-1. The housing unit estimates in this Figure include full-time and seasonal housing units.

**Figure 2-1  
Population and Housing**



## Employment

In the year 2000, there were about 1,200 persons employed in the Birch Bay area. By the year 2020 the employment base is forecast to have grown to 2,930 employees. The employment forecast represents the number of persons reasonably expected to be employed in the Birch Bay area serving the Birch Bay trade area.

## Land Use

**Existing Development Patterns.** Development at Birch Bay has primarily occurred along major roads and highways. The most intense development occurs along Birch Bay Drive. Any further residential development along Birch Bay Drive will take the form of condominiums and time-share hotels and motels. Any significant development along Birch Bay Drive will come in the form of redevelopment, meaning that existing low value structures will be demolished and new high value structures will take their place.

There are a number of major landholdings in the Birch Bay planning area. The major land owners (over 500 acres) in the Birch Bay planning area and adjacent areas are: The Trillium Corporation and British Petroleum / Cherry Point.

The Birch Bay planning area contains a large amount of wetlands. Wetlands come in different classifications and functions. There is a considerable amount of debate on what classifications of wetlands can be developed and what classifications must remain free of development. This plan makes the assumption that all wetlands are to remain out of development.

**Alternative Land Use Plan Scenarios.** The Birch Bay Community Plan Steering Committee looked at a number of alternative land use plan scenarios as they relate to commercial land development. The following alternative scenarios were considered:

1. Concentrate commercial development along Birch Bay Drive in the existing Resort Commercial zoning district.
2. Spread commercial development throughout the planning area in neighborhood commercial nodes.
3. Concentrate commercial development in selected commercial nodes at the intersection of arterial and/or collector roads.

## SUMMARY - BIRCH BAY COMMUNITY PLAN

After considerable review and debate, the Steering Committee chose a preferred alternative, a combination of alternatives 2 and 3. General commercial development is concentrated at the intersection of Blaine Road and Alderson Road and at the intersection of Blaine Road and Birch Bay - Lynden Road and at the intersection of Lincoln Road and Shintaffer Road. The Steering Committee proposed no change to the commercial development along Birch Bay Drive. Further, the Steering Committee stated that they wanted to retain all existing commercial zoning and commercial activities.

**Proposed Land Use Plan Goals.** The proposed land use plan is shown in Figure 2-2. The plan reflects the goals of the Growth Management Act; specifically the goal on urban growth which states the following: "Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner." The proposed plan meets that goal by channeling growth to areas that are currently served by sewer and water utility services by the Birch Bay Water and Sewer District. The proposed plan further channels growth to areas where existing water and sewer utility services can be extended.

The proposed plan also follows the GMA goal on sprawl stating: "Reduce inappropriate conversion of undeveloped land into sprawling, low-density development." The proposed plan follows this goal by removing the Birch Point area and part of the Point Whitehorn area from the existing UGA and adding only 100 acres along Blaine Road that are currently zoned for rural development, R-10A zoning district. The current zoning designations are shown in Figure 8-1 in Chapter 8 entitled Current Zoning.

Further, the proposed plan supports the GMA goal on property rights, stating the following: "Private property shall not be taken for public use without just compensation having been made. The property rights of landowners shall be protected from arbitrary and discriminatory actions."

Further, the proposed plan supports the GMA goal on citizen participation and coordination, which states the following: "Encourage the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to reconcile conflicts." Our Steering Committee and Neighborhood based planning structure supports this goal. Further, the current planning program is supported financially by a wide variety of interests, both public and private. Negotiations with major land owners, industries, and governmental entities such as the State Park, the Fire Districts, the School District, the Trillium Corporation, BP Cherry Point, The Port of Bellingham, Gold Star Resorts, and the City of Blaine are continually ongoing.

## SUMMARY - BIRCH BAY COMMUNITY PLAN

Finally, the proposed land use plan has been designed not only to meet the GMA goals but also took into consideration the following:

1. Meets the Growth Management Act goals.
2. Is consistent with the Whatcom County Comprehensive Plan goals and policies.
3. Meets the Birch Bay vision statement and land use goals and policies.

**Proposed Land Use Plan Concepts.** The proposed land use plan is a composite of many parts. The parts that have major impacts on the plan are discussed in summary form below. Taken together, they represent the proposed land use plan.

### Development Density.

1. Limits urban density development to the current long-range urban growth area, minus approximately 620 acres at Birch Point and approximately 125 acres at Point Whitehorn removed from the UGA plus 100 acres east of Blaine Road and south of Alderson Road added to the UGA.
2. Establishes a minimum density of 4 housing units per developable acre as the minimum development density for new single-family residential development. Establishes a minimum density of 10 housing units per developable acre as the minimum development density for multi-family development. Critical areas, buffers and land dedicated for public facilities or open space shall not be counted in calculating minimum densities.

### Residential Land

1. Retains existing UR-4 and URM-6 zoning districts except in the Birch Point and Point Whitehorn areas which have been removed from the UGA and designated as Rural.
2. Encourages major land owners to develop any property greater than 40 acres as a planned unit development.
3. Creates a multi-family zoning district around the general commercial district at Blaine Road and Alderson Road.

## SUMMARY - BIRCH BAY COMMUNITY PLAN

### Commercial Land

1. Reserves the Resort Commercial zoning along Birch Bay Drive for tourist related activities.
2. Locates additional commercial areas at the intersections of Blaine Road and Alderson Road and Lincoln Road and Shintaffer Road.

### Rural Land

1. Maintains the current urban-rural boundary with the exception of the Birch Point and Point Whitehorn areas removed from the UGA and a 100-acre expansion of the UGA southeast of the Blaine Road and Alderson Road intersection.
2. Retains the integrity of existing R-5A and R-10A zoning and converts rural land to urban use only for 100 acres.

### Industrial Land

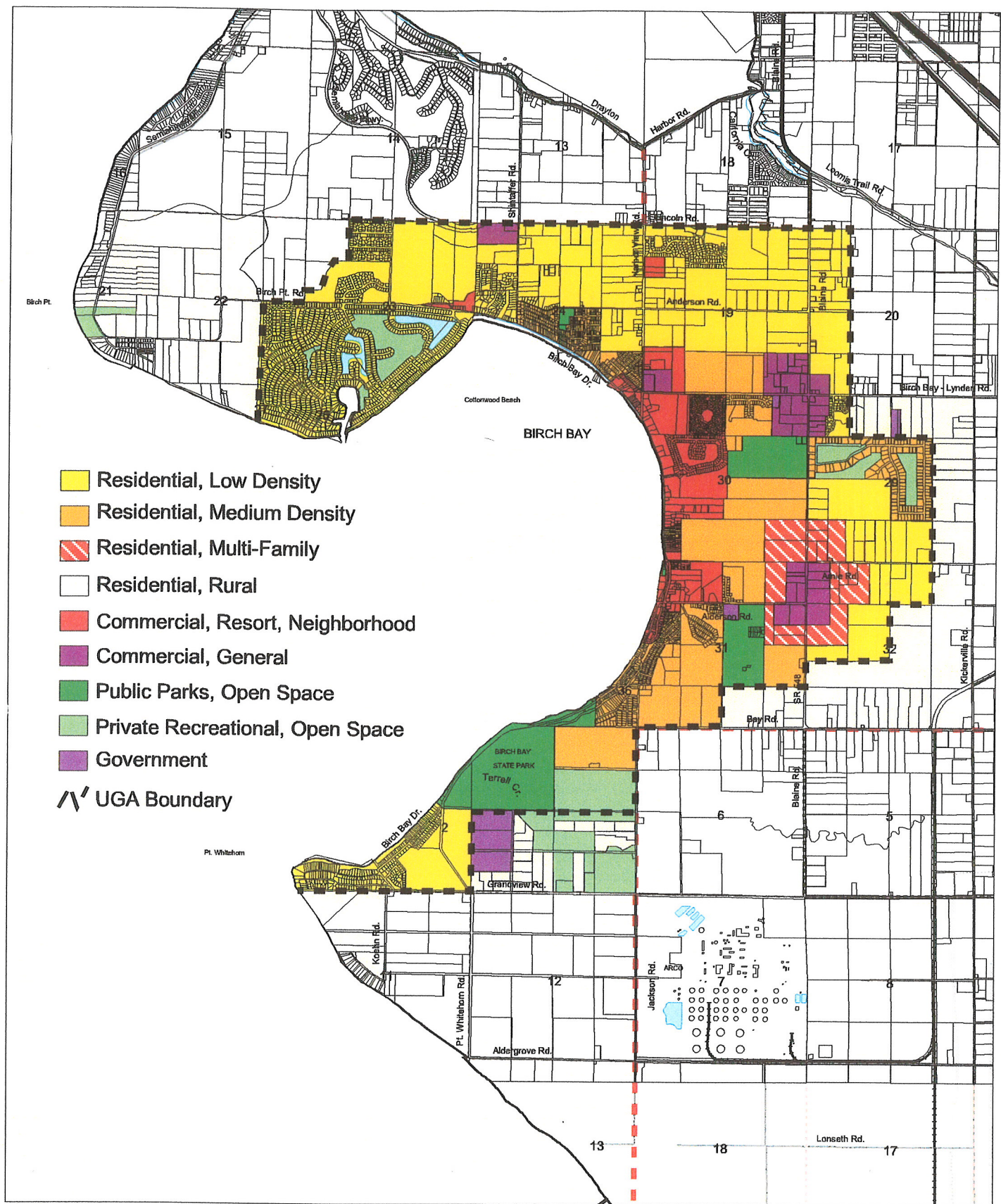
1. Recommends setting aside land, west of Jackson Road, south of Grandview Road that is in the Cherry Point/Ferndale Subarea for light industrial development.

### Mixed Use Land

1. Because of the proximity of new large housing units one to one and a half miles from the Cherry Point Heavy Impact Industrial zone, the Birch Bay Steering Committee recommends that the concept of a mix of light industrial, open space, and parks and recreation be considered for the area west of Cherry Point, west of Jackson Road and south of Grandview Road. Because of this proximity and the attendant impacts, the Birch Bay Steering Committee should have representation when the subarea plan is reviewed for this area.

### Shorelines and Critical Areas

1. Keeps all identified wetlands out of development.
2. Protects shorelands and other critical areas.



# Proposed Land Use Plan

1 0 1 Miles



## SUMMARY - BIRCH BAY COMMUNITY PLAN

### Road and Utility Improvements

1. Recommends road improvements along Lincoln Road, Birch Bay - Lynden Road, Grandview Road, Blaine Road, and Harborview Road.
2. Proposes new road alignments along sections of Lincoln Road, Shintaffer to Birch Point Road, and a road extending west from Blaine Road to the vicinity of the existing golf course, east of Birch Bay Drive.
3. Discourages excessive and out of the area auto traffic movements along Birch Bay Drive.
4. Encourages pedestrian and bicycle oriented development by locating multi-family development adjacent to general commercial areas, such as the general commercial area at Blaine Road and Alderson Road.

### Zoning

1. Constructs the proposed plan using existing zoning classifications.

**Buildout Capacity of the Proposed Plan.** Taking into consideration existing development, wetlands and other critical areas, existing zoning, development densities, utility and road right-of-ways, rural and urban distinctions, and other factors, the question is: "Can the proposed plan accommodate the projected growth of 3,457 year-round and seasonal housing units by 2022?" The answer to that question is "yes."

The analysis begins with the total land area in a planning area. From the total land area the amount of land in existing development is subtracted out. Also subtracted out is the land area in existing road rights-of-way, park and open space use, and all land devoted to government operations. Further, all land zoned for commercial and industrial uses are subtracted out. The net result is gross land for residential development.

Not all gross residential land can be developed for residential uses. All identified wetlands are subtracted out, and so are future road rights-of-way (25 percent in urban areas and 10 percent in rural areas). An additional 25 percent of land will be subtracted out to account for what is called a market factor. A market factor is a subtraction of developable land that is forever being held out of development. The assumption is that for a real estate market to function properly, about 25 percent of land must be on the market, available for purchase.

Subtracting out wetlands, future road rights-of-way, and the market factor, results in net land for residential development. Multiplying the net residential land



by the development density factor of 4.0 in the UR4 zone, 6.0 in the URM 6 zone, 16 in the RC zone and dividing by 5 and 10 respectively in the R5A and R10A zones results in the build out capacity of developable land resulting in the number of housing units. Table 2-1 shows the proposed plan buildout capacity in housing units for the planning area.

The total land area of the Birch Bay community planning area amounts to 8,343 acres or about 13 square miles. Of the total land area, 3,963 acres or 47.5 percent are not available for residential development. As shown in Figure 2-3, about 1,107 acres have already been developed in urban and rural uses. Existing road rights-of-way consume an additional 477 acres. Parks, open spaces and government uses consume another 647 acres. And, an additional 1,732 acres have been reserved for commercial and industrial development. This leaves 4,380 gross acres in the planning area for residential development of which 2,353 acres are in the UGA and 2,027 acres are Rural.

Gross developable land has to be further scaled back to account for wetlands, future road rights-of-way, and a market factor to assure the proper functioning of the real estate market. As shown in Figure 2-4, about 2,024 net acres of land are available for residential development in the planning area, 706 acres in the UGA and 1,318 acres of Rural land. Wetlands consume 942 acres, road rights-of-way consume another 555 acres, and the market factor 860 acres, leaving a balance of 2,024 net acres for residential development.

**Development Densities.** Development density is a number that is derived by dividing the number of housing units by the number of acres of developable land. The Growth Management Hearings Boards, in interpreting the meaning of the Growth Management Act, state that land in any urban growth area should be developed at the density of at least 4 housing units per one acre of developable land. The controversy comes in defining developable land. There is "gross" developable land and "net" developable land. Gross developable land generally means raw developable land that includes road rights-of-way, wetlands, open space and other open lands, such as the market factor.

Net developable land, on the other hand, means land that is devoted exclusively for residential (single and multi-family) building lots. Even the net developable land definition has its peculiarities. For example, wetlands on a building lot can be counted toward meeting the minimum lot size, if a structure can be adequately sited on the lot, considering setbacks for wetlands and public rights of way. Whatcom County, in their administration of the zoning code, defines density as "gross" density. Therefore, this plan looks at both the gross and net density and draws the following conclusions.

# SUMMARY - BIRCH BAY COMMUNITY PLAN

Table 2-1

Buildout Capacity for Planning Area

ZONING DISTRICT	BIRCH BAY UGA RESIDENTIAL (Excluding Birch Point & Pt. Whitehorn)		BIRCH BAY UGA COMMERCIAL/RECREATION			RURAL - Includes Birch Point & Portion of Pt. Whitehorn		CHERRY POINT UGA (within planning area)		TOTALS
	UR4	URM6	RC*	NC	GC	R5A	R10A	LII	HII	
<b>TOTAL ACRES</b>	2,185	1,262	317	18	103	1,961	786	482	1,229	8,343
<b>OCCUPIED OR COMMITTED ACRES</b>										
Existing Development	242	380	131	7	10	242	95	0	0	1,107
Parks, Open Space, Government	149	187	45	0	2	218	8	0	38	647
Existing Roads	125	72	18	1	6	112	45	28	70	477
Commercial/Industrial Land			62	10	85			454	1,121	1,732
<b>VACANT LAND (ACRES)</b>	1,669	623	61	0	0	1,389	638	0	0	4,380
<b>LESS:</b>										
Wetlands, buffers, streams	681	241	20	N/A	N/A	N/A#	N/A#			942
Future Rds. (25% in UR, 10% in R)	247	96	10	N/A	N/A	139	64			555
Market Factor (25%)	247	96	10	N/A	N/A	347	160			860
<b>NET RES. LAND AVAILABLE (ACRES)</b>	494	191	21	0	0	903	415	0	0	2,024
x residential density@	4/ac.	6/ac.	16/ac.	N/A	N/A	1/5 ac.	1/10 ac.	N/A	N/A	
<b>NEW HOUSING UNIT CAPACITY</b>	<b>1,976</b>	<b>1,146</b>	<b>328</b>	<b>0</b>	<b>0</b>	<b>181</b>	<b>41</b>	<b>0</b>	<b>0</b>	<b>3,672</b>

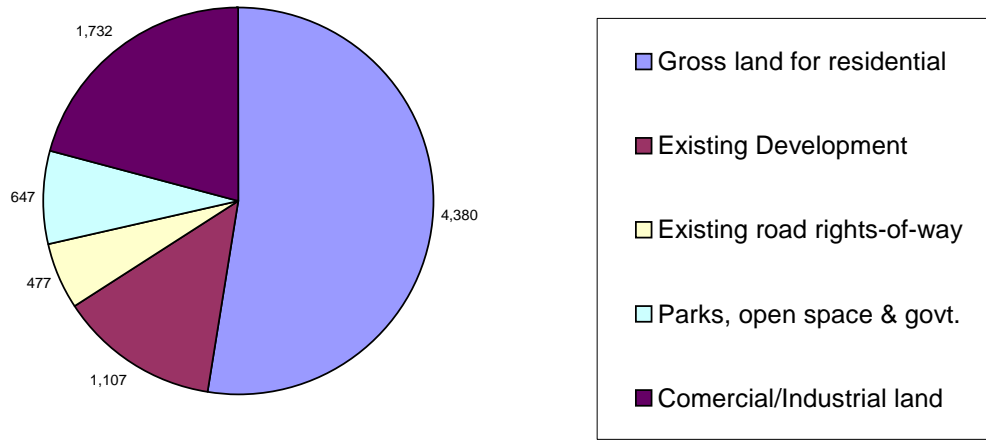
\* Assumes that half of vacant RC land will develop as condominium or time-share units (remainder will be commercial or recreational)

# Wetlands are not subtracted from Rural Zoning (5 and 10 acre lots can include wetlands)

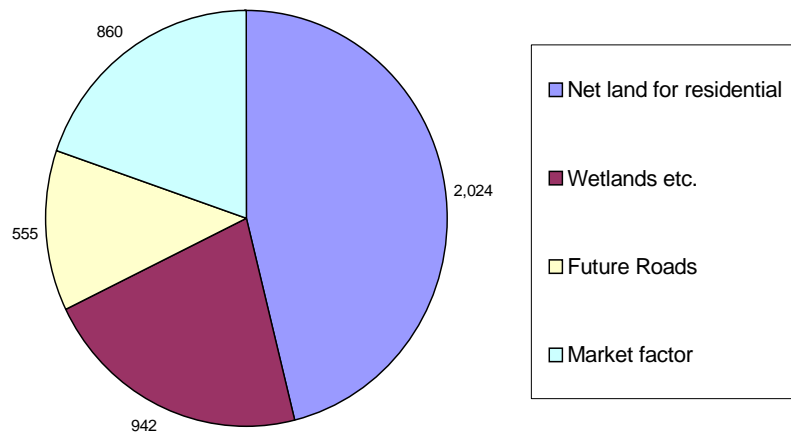
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## SUMMARY - BIRCH BAY COMMUNITY PLAN

**Figure 2-3 Gross Land for Residential Development (Acres)**



**Figure 2-4 Net Land for Residential Development (Acres)**



## SUMMARY - BIRCH BAY COMMUNITY PLAN

The proposed Birch Bay Urban Growth Area has the following development densities:

### **Residential Land, Including Multi-Family**

Gross development density: 3,450 housing units / 2,353 acres (after subtracting Rural areas) = 1.47 dwelling units per acre.

Net development density: 3,450 housing units / 706 acres = 4.89 dwelling units per acre.

**Conclusion.** As shown in Table 2-1, the buildout capacity of the proposed UGA is 3,450 housing units. The demand for housing units in the year 2022 is 3,457 seasonal and full-time units. The land demand and supply figures are nearly equal and thus are considered adequate. To avoid an over supply of land and prevent sprawl, the Long-Term Planning Areas will be retained at rural density until the Short Term Planning Areas have infilled at urban densities and infrastructure to support urban development is available. As shown in Table 2-1, the proposed urban growth area has adequate buildable land supply to accommodate 3,450 housing units. The rural area in the Birch Bay planning area can now accommodate 222 housing units.

When measured in terms of development density, the proposed Birch Bay Urban Growth Area is within the bounds of the Growth Management Act. The net residential density within the Birch Bay Urban Growth Area is 4.89 units per developable acre.

The conclusion is that the proposed plan has adequate land to accommodate the projected 20 year growth. In addition, a 100 acre piece of land, proposed for multi-family development, east of Blaine Road and south of Alderson Road, is also included in the proposed urban growth area. Currently, this 100 acre piece of land is in R-10A zoning. The proposed urban growth boundary is shown in Figure 2-8.

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## Transportation

**Proposed Transportation Plan.** The transportation systems plan proposed in the Birch Bay Transportation Planning Study provides a long-range strategy for the Birch Bay UGA to address current and forecast transportation issues and needs. Transportation system improvements are required to accommodate the projected growth in population and employment within the Birch Bay UGA. The transportation systems plan is based upon analyses of the existing transportation system, forecasts of future travel demands, anticipated availability of funding resources, and the desire of the Birch Bay community to create an efficient transportation system that puts a priority on community livability. The Plan builds on the countywide policies and standards, while shaping transportation goals and vision for the Birch Bay subarea.

The transportation systems plan primarily focuses on streets and highway improvements because they serve most of the travel needs for the subarea. The streets and highways serve general traffic, freight, transit, ridesharing, pedestrians, and bicyclists. Therefore, the Plan also provides the framework for other travel modes in the community, including pedestrian, bicycle, and transit modes.

**Transportation Improvement Projects.** Based on an evaluation of existing and forecast traffic volumes, traffic operations, safety, and circulation needs, a recommended list of transportation improvement projects and programs were defined. These projects are shown on Figure 11-7 and listed in Table 11-3.

**State Route Projects.** I-5 provides the primary regional connection to the Birch Bay subarea. To the north, I-5 connects the Birch Bay subarea to the U.S./Canada border. To the south, I-5 connects to Bellingham and the central Puget Sound region. SR 548 also provides for regional travel from the Birch Bay subarea to I-5 from the north and east. The Washington State Highways Systems Plan (HSP) is the element of Washington's Transportation Plan that addresses the states highway system. The 2007-2026 HSP does not identify specific improvements within the Birch Bay subarea. The HSP calls for an Interstate Master Plan that would identify improvements to optimize capacity and safety on the interstate highway system.

Improvements to the I-5/Birch Bay-Lynden Road interchange (projects S-11, S-12) are identified in the Plan as high and medium priorities respectively. Improvements to this interchange have been identified to meet near and long term needs. Project S-11 will improve operations in the near term by redesigning the ramp intersections with turn lanes and installing a traffic signal, when future traffic volumes warrant. Project S-12 will provide a complete reconstruction of the interchange.

## SUMMARY - BIRCH BAY COMMUNITY PLAN

Improvements to the I-5/Grandview interchange (projects S-13, S-14) are also identified for the near and long term needs. Similar to project S-11, project S-13 is a high priority and is identified to improve operations at the ramp intersections by adding turn lanes and installing a traffic signal when future traffic volumes warrant. Project S-14 is a medium priority and will provide a complete interchange reconstruction to meet long-range forecast needs.

Blaine Road (SR 548) – Improvements are identified for Blaine Road both north and south of Birch Bay-Lynden Road. North of Birch Bay-Lynden Road, the Plan calls for reconstructing Blaine Road, from I-5 to Birch Bay-Lynden Road (projects S-1, S-2). The improvement projects would add shoulders for non-motorized travel. Intersection improvements are identified at Drayton Harbor Road and Loomis Trail Road (projects S-5, S-6). These improvements include adding turn lanes and traffic signals or roundabouts when future traffic volumes warrant. The Plan also identifies the replacement of two bridges in this corridor, the California Creek bridge and the Dakota Creek bridge (projects S-8, S-9).

South of Birch Bay-Lynden Road, the Plan identifies reconstructing Blaine Road from Birch Bay-Lynden Road to Grandview Road (projects S-3, S-4). The section of Blaine Road north of Bay Road is within the Urban Growth Area for Birch Bay and as such would be reconstructed to WSDOT's standards, adding shoulders for non-motorized travel. South of Bay Road, Blaine Road should be constructed per WSDOT's rural collector standards. Intersections improvements at Birch Bay-Lynden Road and Grandview Road are also identified in the Plan (projects S-15, S-7). A potential roundabout at the Blaine Road (SR 548)/Grandview Road (SR 548) intersection is currently being discussed by WSDOT as part of a developer funded improvement. Though the transportation planning study does not identify the intersection of Blaine Road and Alderson Road as falling below LOS standards within the study period, planned intensive land uses at that intersection may require intersection improvements as mitigation under SEPA at the time of development.

Grandview Road (SR 548) – Two intersection improvements, in addition to those identified at the I-5 interchange and at Blaine Road (SR 548), are identified in the Plan. Improvements to the intersections of Grandview Road (SR 548) at Kickerville Road and at Vista Drive include the installation of turn lanes and roundabout or traffic signal when future traffic volumes warrant. The improvement at Vista Drive/Grandview Road (SR 548) is a high priority because it serves traffic to/from the Birch Bay UGA to I-5 via Bay Road.

However, the HSP does identify I-5 from Grandview Road to the City of Blaine as a "solution that requires further analysis" as the existing capacity will not be sufficient for future traffic volumes.

Intersection Projects. Improvements to intersections along County maintained arterials serving the Birch Bay subarea are needed to resolve existing and future deficiencies, primarily along Birch Bay-Lynden Road. This roadway serves as the main east-west arterial, connecting the Birch Bay subarea to I-5 and the rest of the region.

## SUMMARY - BIRCH BAY COMMUNITY PLAN

Intersection improvements along this corridor will improve safety and operations by adding turn lanes at key locations and installing traffic signals or roundabouts when future traffic volumes warrant. The Plan identifies three high priority intersection improvements at Birch Bay-Lynden Road at Portal Way, Birch Bay-Lynden Road at Harborview Road, and Birch Bay Drive at Harborview Road.

### New Roadways and Major Widening or Reconstruction Projects.

Several new roadways and major widening projects are identified in the Plan to address existing deficiencies and support future growth. This category of projects includes upgrading and major widening of roadways to County standards to provide turn lanes at major access locations. Improvements to non-motorized facilities, such as roadway shoulders, are also identified.

Birch Bay-Lynden Road Widening – Birch Bay-Lynden Road serves as the primary east-west arterial, connecting Birch Bay to I-5. In addition to the intersection improvements identified above, the Plan calls for widening the roadway to meet rural major collector standards from Portal Way to the UGA boundary just east of Blaine Road (SR 548) and to urban principal arterial standards west to Harborview Road. These projects would improve facilities for non-motorized travel by paving roadway shoulders and/or adding sidewalks or separated pathways. In addition, the project would include widening to accommodate turn lanes at major access locations. This will allow safer and easier access for left turning vehicles along Birch Bay-Lynden Road.

Lincoln Road Extension and Improvement – To complete an alternative east-west corridor north of Birch-Bay Lynden Road, an extension of Lincoln Road between Harborview Road and Blaine Road (SR 548) is planned. In addition to extending the roadway, the project will improve Lincoln Road from Shintaffer Road to Blaine Road (SR 548) to urban minor arterial standards, including construction of two roundabouts at Harborview Road and Blaine Road. The project also includes a separated pathway for non-motorized travel.

Birch Point Connector Road – A new connection between Birch Bay Drive and Lincoln Road is also a key new collector route serving the northern part of the Birch Bay UGA. When fully constructed, this new roadway will provide improved mobility and an alternative to Birch Bay Drive for east-west traffic to/from the residential growth anticipated in the Birch Bay and Blaine UGAs. The project includes realigning the segment of Shintaffer Road south of Lincoln Road, and constructing a new intersection at Lincoln Road. Part of the road would be funded and constructed by a developer. The remaining section will be a County project.

Harborview Road – Improvements are identified for Harborview Road from Birch Bay Drive to Drayton Harbor Road. The section of Harborview Road from Birch Bay Drive to Birch Bay-Lynden Road would be improved to reflect the existing and future demands of Birch Bay traffic traveling to I-5 via Birch Bay-Lynden Road. The section of



## SUMMARY - BIRCH BAY COMMUNITY PLAN

Harborview Road from Birch Bay-Lynden Road to Drayton Harbor Road would be improved to urban collector standards. Both of these projects would include improved facilities for non-motorized travel.

**Commercial Area Circulation Roads.** In addition to specific improvements identified above, the Plan calls for construction of new circulation roads within the planned Birch Bay UGA commercial area between Birch Bay-Lynden Road and Alderson Road. These new roadways would provide improved access and circulations to future development anticipated for this area, as well as help maintain safety and operations of adjacent arterials, collectors, and state highways.

**Minor Widening and Reconstruction Projects.** Improvements are also needed on other roadways serving the Birch Bay subarea. This category of projects includes minor widening of roadways to add shoulders and improve non-motorized facilities.

**Birch Bay Drive** – With its proximity to the waterfront, Birch Bay Drive serves as a primary non-motorized route within the Birch Bay UGA. The Birch Bay Drive Pedestrian Facility, part of the Birch Bay Shoreline Enhancement Project, is designed and identified in the county's six-year Transportation Improvement Program. This project would improve the Birch Bay Drive roadway and provide separate facilities for pedestrians and bicyclists. The 2000 Birch Bay Economic Development Action Plan emphasized the need for improved pedestrian and bicycle facilities along Birch Bay Drive as part of the community's economic development strategy. A year round speed limit of 20 to 25 mph is recommended. Specific changes to speed limit should be considered with community input.

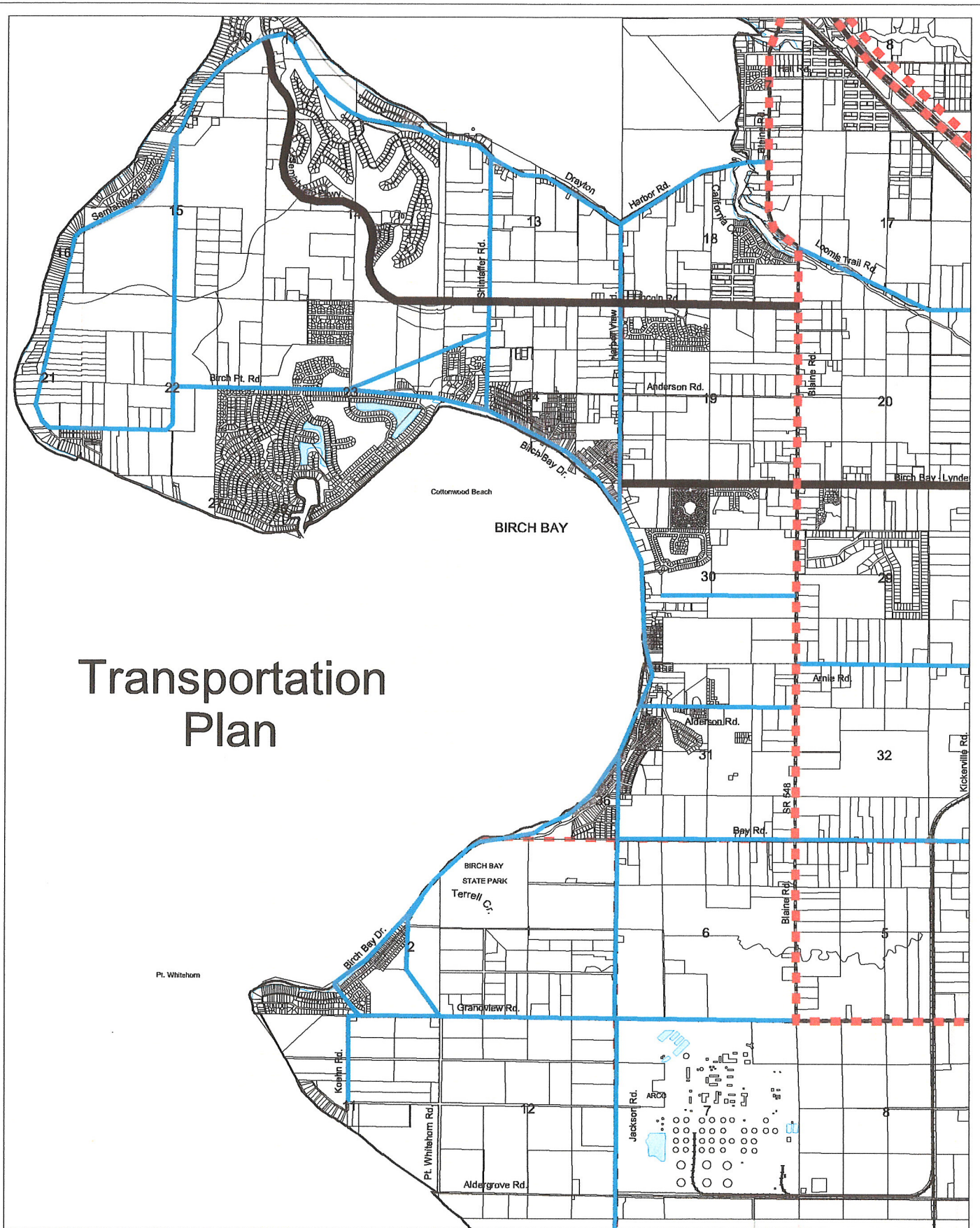
**Loomis Trail Road** – Loomis Trail Road serves as an east-west connector between Portal Way and Blaine Road, northeast of the Birch Bay UGA. The Plan identifies improvements to reconstruct Loomis Trail Road to rural major collector standards. The project includes paved shoulders for non-motorized users.

**Maintenance and Operations Programs.** A systematic program for maintaining the existing and future transportation infrastructure is critical to a safe and efficient transportation system. Elements of a maintenance and operations program for the Birch Bay subarea should include a systematic evaluation of pavement conditions on arterial and local roadways, signage, sight distance (such as vegetation blocking sight lines), and impacts of parking on safety and operations. Other elements should include regular monitoring and servicing of traffic control devices, such as traffic signals and flashing beacons.

In addition, the maintenance and operations program should include a periodic evaluation of speed limits on facilities based on functional classification, design, and current roadway conditions. The speed evaluation should consider elements such as geometric design,

## SUMMARY - BIRCH BAY COMMUNITY PLAN

actual travel speeds, intersection control, traffic safety, and possible impacts on adjacent corridors or neighborhood streets.



# Transportation Plan



1 0 1 Miles



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### Water and Sewer Utilities

Water and sewer services for the Birch Bay area are provided primarily by the Birch Bay Water and Sewer District. The service boundary of the Birch Bay Water and Sewer District covers about 6,700 acres. The District presently purchases potable water from the City of Blaine and distributes it to its metered customers through a District owned piping system. The district just recently signed a 30-year contract to continue purchasing sufficient water from the City of Blaine to meet the forecasted twenty year demand for water. The District operates a wastewater treatment plant located south of the Birch Bay State Park. The Birch Bay Water and Sewer District is governed by three publicly elected commissioners and managed by professional staff.

In addition to the Birch Bay Water and Sewer District, two additional water districts provide water to residents of the Birch Bay area. They are the Bell Bay Jackson Water Association and the Grandview Beach Water Association. The Bell Bay Jackson Water Association boundaries are aligned along Bay, Jackson and Kickerville Roads and the association serves about 100 customers. The smaller Grandview Beach Water Association is located along the beach, south of Point Whitehorn, and serves about 15 customers.

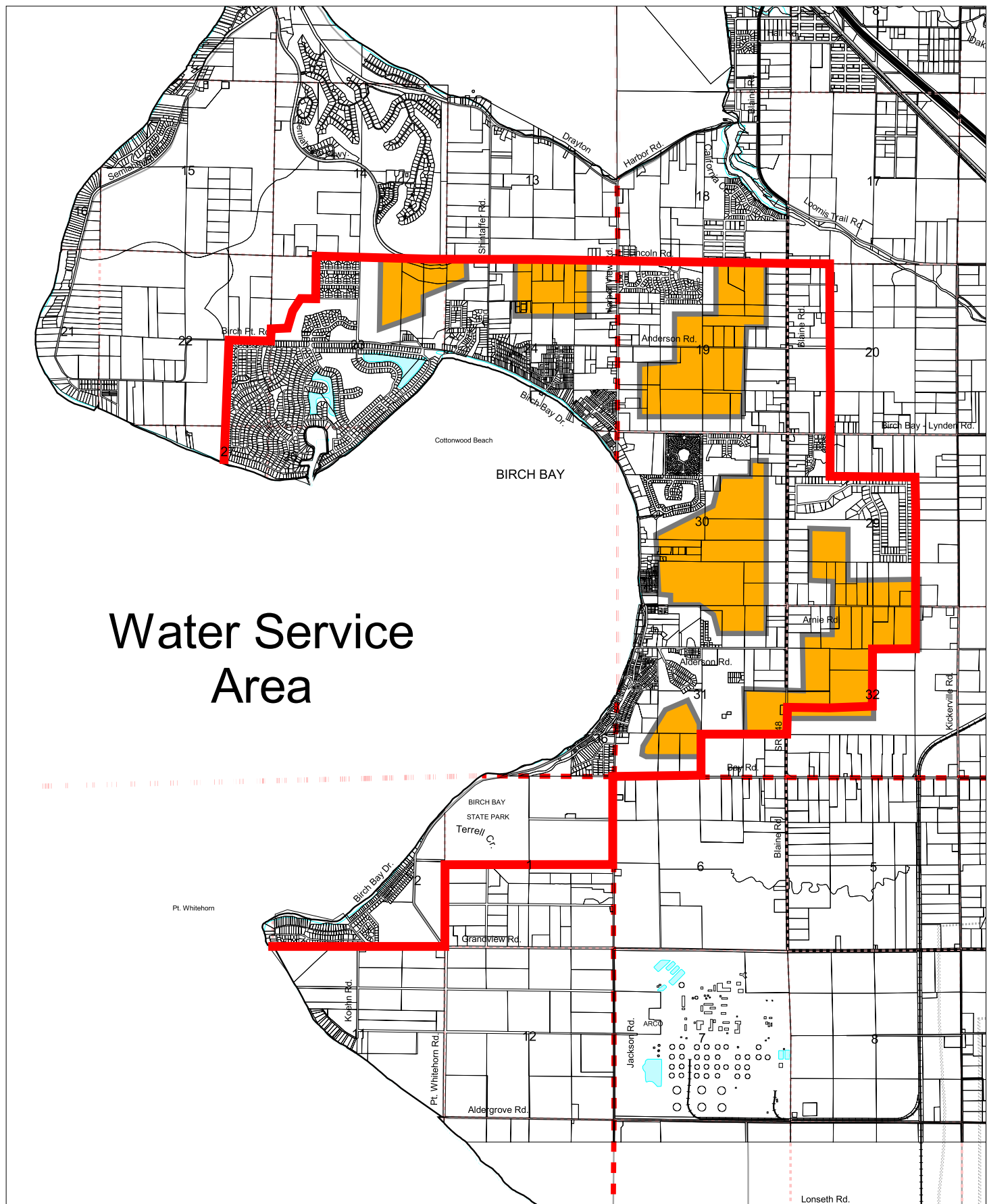
**Water Supply.** As stated earlier, the District just recently signed a long term contract with the City of Blaine to continue receiving water supply that is forecasted to satisfy the demand for the next thirty years. In addition, the District has a 500 gallons per minute well that is in the process of being certified as a supply source by the Department of Ecology.

**Water Storage and Distribution.** The current water distribution area is shown in Figure 2-6. Three strategically placed water storage tanks with 3.1 million gallon capacity and a system of water mains form the backbone of the water distribution system. Extensions of water mains to serve newly developing areas are paid by developers and builders through a hookup charges. Replacement of aging and undersized pipes is paid by all ratepayers. On site improvements are paid entirely by builders and developers. The District has an aggressive capital improvements program, paid both by existing ratepayers and new developments.

**Future Development Water Needs.** The Birch Bay Water and Sewer District has the capacity and the means of delivering water to the forecasted development as identified in the Birch Bay Community Plan. The District's short and long-range capital facilities plan identifies both water storage and distribution

## **SUMMARY - BIRCH BAY COMMUNITY PLAN**

systems that will adequately serve the areas within the Birch Bay Community Plan that are not being served today.



# Water Service Area



Proposed Urban Growth Area



Water Service Expansion Areas

1

0

1 Miles



Figure 2-6

**Wastewater Treatment Capacity.** The wastewater treatment facility, located south of the Birch Bay State Park, has adequate capacity to continue to serve current and new customers for at least six to eight years. After that, the District needs to expand the capacity of the wastewater treatment plant.

**Wastewater Collection System.** The District collects its wastewater throughout the Birch Bay area by means of an extensive piping and lift station system. The wastewater collection areas are shown in Figure 2-7. The collection system, including lift stations, is systematically renewed to replace aging and undersized piping. General maintenance and replacement are paid for by overall ratepayers. Expansions to newly developing areas are paid by developers and builders by means of hookup fees. All on-site costs are paid by builders and developers.

**Future Development Sewer Needs.** The District is well equipped to provide quality sewer services to its current customers plus forecasted future growth. As stated earlier, the treatment capacity of the wastewater treatment plant needs to be upgraded in a six to eight year period. The collection system is adequate to continue serving existing customers, and will need to be expanded in the next 20 years, depending on the location and timing of new development. . Overall, the wastewater collection and treatment system has the capacity to expand to serve the forecasted twenty year urban growth.

## Urban Growth Area

The Birch Point and Point Whitehorn areas are removed from the UGA to protect steep slopes and marine resources in these areas. To accommodate urban growth, the growth boundary is expanded to include land east of Blaine Road at Alderson Road.

Figure 2-8 shows the proposed urban growth area for the Birch Bay Community plan. About 100 acres of rural zoned land needs to be converted to urban designation and made part of the urban growth area.

## Concurrency

The proposed Birch Bay Community Plan meets the transportation, water and sewer concurrency requirements. The Whatcom County Public Works Department and the Washington State Department of Transportation have demonstrated in the transportation chapter and in the capital facilities chapter that they are capable and committed to meeting the transportation needs of the Birch Bay Community for the next twenty years. Similarly, the Birch Bay Water and



Sewer District has demonstrated in the utilities and capital facilities chapters their ability and commitment to serve the current customers plus forecasted newcomers with adequate levels of water and sewer services. Overall, the proposed Birch Bay Community Plan meets the concurrency requirements as set out in the Growth Management Act.

### Economic Development

The economy of the Birch Bay area is healthy. Income and property values of Birch Bay residents exceed those of its neighboring communities and Whatcom County as a whole. Purchasing power of the Birch Bay Community is significant and most of its consumer dollars are expended outside the Birch Bay area. To capture the consumer dollar, the Birch Bay Community needs commercial areas for retail and services of significant size to attract competitive retail and service outlets. The proposed community plan identifies such commercial areas at Blaine Road and Alderson Road, Blaine Road and Birch Bay-Lynden Road and again at Lincoln Road and Shintaffer Road.

Currently, there are few employment opportunities, other than hotel/motel services, in the area. Generally, encouraging commercial development also promotes office and service type of employment. With an increase in retail and service facilities, general office type and professional services type of employment is forecasted to increase.

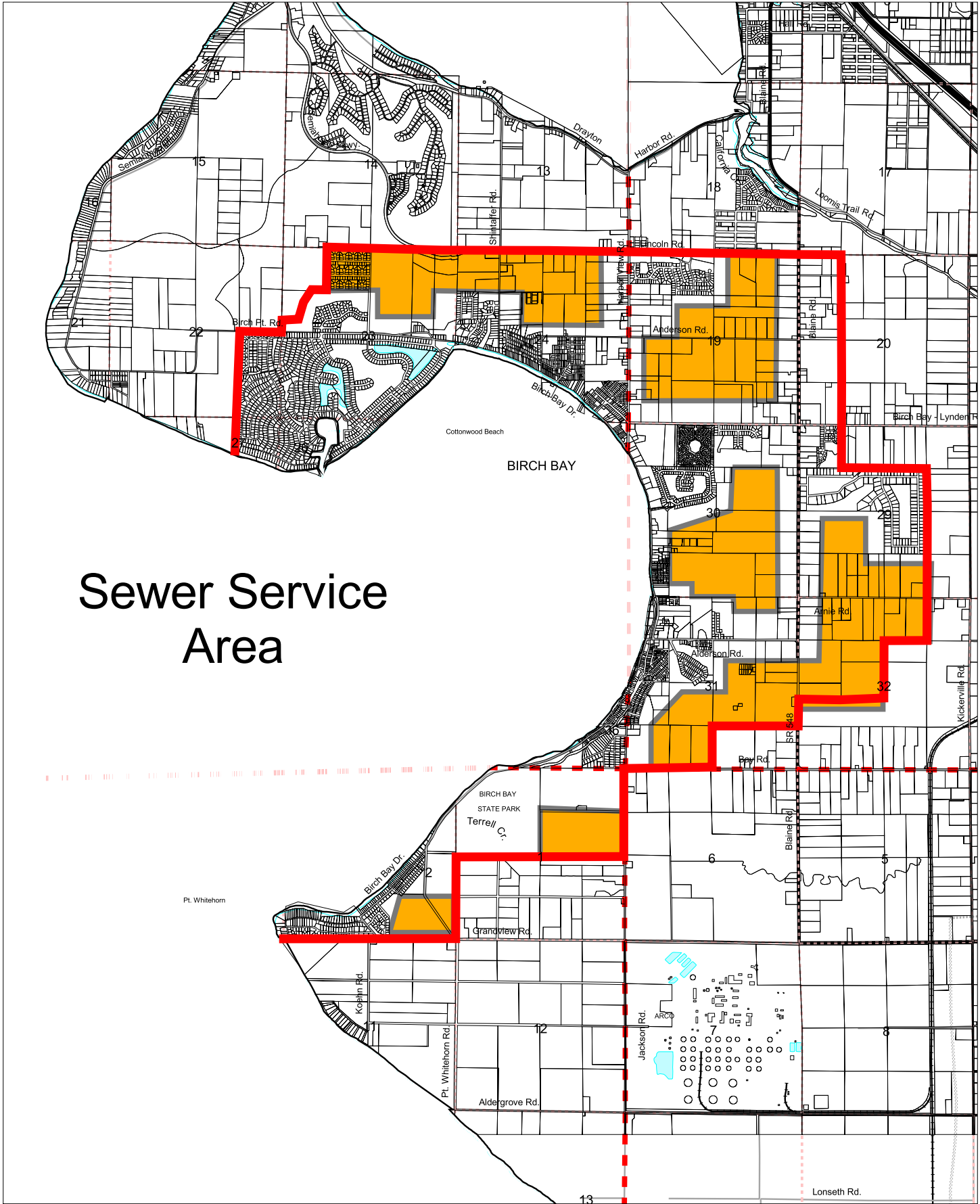
### Governance

The Plan took an in-depth look at the governance issues facing the Birch Bay community and concluded that incorporation or annexation to the City of Blaine were viable options.



**Incorporation.** If the territory within the proposed urban growth area, were to incorporate, the revenues would exceed operating expenses with a modest amount left over for capital improvements. The revenue estimates were on the conservative side and the expense estimates were more liberal.

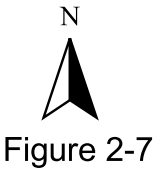
**Annexation to the City of Blaine.** Financially, annexation to the City of Blaine would be a wash, in comparison to staying a part of the Whatcom County unincorporated urban growth area. Annexing to the City of Blaine would clearly improve the level of police service. The City and County Comprehensive Plans would need to be amended to include Birch Bay in the City of Blaine Urban Growth Area prior to annexation.

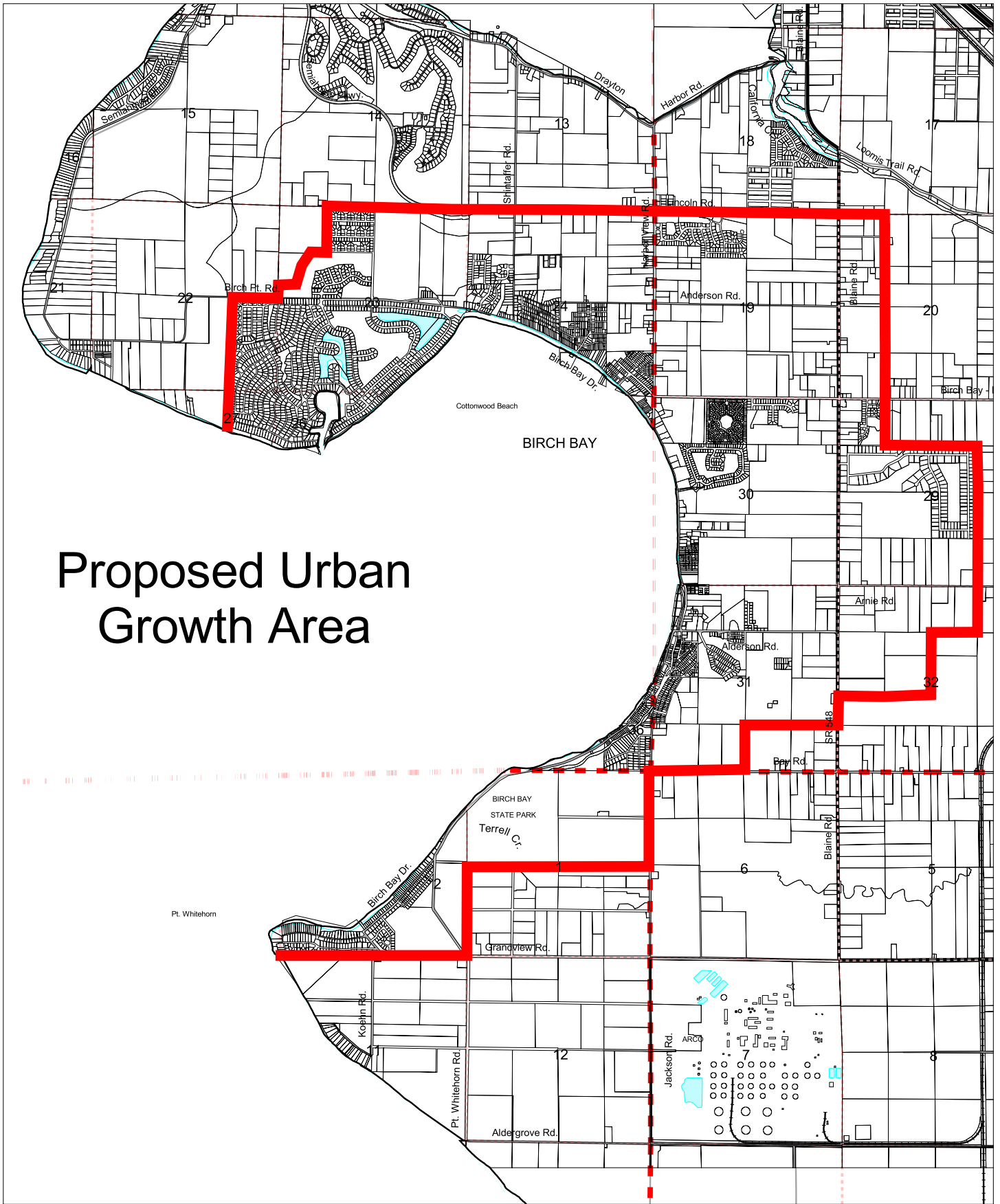




# Sewer Service Area

 Proposed Urban Growth Area  
 Sewer Service Expansion Areas





# Proposed Urban Growth Area



Proposed Urban Growth Area



Figure 2-8

## Chapter 3

# PLANNING PROCESS

## Birch Bay Community

### Community Planning Area

The Birch Bay Community Planning Area is located in northwest Whatcom County as shown in Figure 3 -1. The Planning Area is located along Birch Bay, a saltwater inlet of Puget Sound, northeast of the City of Ferndale and south of the City of Blaine. The Canadian border is six miles to the north and the City of Bellingham is seventeen miles to the south. The Birch Bay Community Plan boundaries include most of the Birch Bay US Census Designated Place, the Birch Bay Urban Growth Area, those areas whose development is likely to affect Birch Bay, and those areas that are likely to be affected by development in Birch Bay. The heart of Birch Bay Planning Area is the 12.2 miles of saltwater shoreline most of which is designated as Whatcom County's only Washington State designated Marine Shoreline of Statewide Significance. The primary shoreline attraction is the exposed tide flats which extend out as far as a mile at summer low tides providing crabbing, clamming and warm, marine water swimming.

Initially, Birch Bay developed as a summer vacation or resort area catering to vacationing urban populations from the Cities of Seattle and Vancouver. Summertime cabins and camper/trailer lots dotted the waterfront properties. Amusement facilities provided the vacationing public a variety of recreational opportunities. Today, the Birch Bay area is rapidly changing. Vacationers and recreation seekers come to Birch Bay year around. The children who visited Birch Bay with their parents twenty/thirty years ago are returning to purchase a year round home or to buy a lot to build a home in the near future. Birch Bay is turning into a mature community with year-round residents. Birch Bay was the fastest growing urban area of Whatcom County from 1990 to 2000. The planning area is approximately 8,700 acres or 15.5 square miles.

### U.S. Census Designated Place

In 1990, the US Census created the Birch Bay Census Designated Place. In 1990, the population of the Birch Bay Census Designated Place was 2,656 persons. By the year 2000, the population had increased to 4,961 persons, a ten-year growth rate of 86.7 percent.

The Birch Bay Community Planning Area differs somewhat from the Birch Bay Census Designated Place. The boundaries of the Birch Bay Census Designated Place and the Community Planning area are shown on Figure 3 -1. The northern portion of the Birch Point area and the Drayton Harbor area were excluded from the Birch Bay Community Planning area because these areas are part of the Urban Growth Area of the City of Blaine.

### Urban Growth Areas

As an unincorporated community, Birch Bay comprehensive planning is the responsibility of Whatcom County. Recognizing that certain areas of Whatcom County are urban in nature and, to be in compliance with the Washington State Growth Management Act requirements, the County has designated these areas as Urban Growth Areas. Whatcom County, in their GMA Comprehensive Plan, has delineated two urban growth areas for Birch Bay. The Birch Bay urban growth area and the Cherry Point industrial urban growth areas are shown in Figure 3 -2. The Birch Bay urban growth area is further divided into short and long term planning areas also shown in Figure 3 -2. Utility services (sewer and water) are generally available in the short term planning area and therefore, building permits can be readily issued. In the long term planning area utility services may need to be constructed or extended prior to issuance of building permits. Along the north border, the Birch Bay urban growth area joins the urban growth area of the City of Blaine.

### Past Planning Work

As an unincorporated urban area, Birch Bay's comprehensive planning is the responsibility of the Whatcom County Planning and Development Services Department. There have been three past comprehensive planning efforts which have directly affected Birch Bay:

**Figure 3-1**  
Planning Area  
and  
Census Designated Place

## **PLANNING PROCESS**

- Birch Bay Comprehensive Plan, 1977
- Blaine – Birch Bay Sub-Area Plan, 1987
- Whatcom County Comprehensive Plan, 1997

### **Birch Bay Comprehensive Plan 1977**

The 1976-77 Plan was similar in structure to today's 2002 Birch Bay Community Plan in that it established a Citizens Steering Committee to guide community discussion. The recommendations and resulting zoning from the 1976-77 process are essentially still in place today.

### **Birch Bay – Blaine Sub-Area Plan 1987**

To accomplish its comprehensive planning goals in the late seventies, the County divided the western third of the county into ten geographic sub-areas. The Birch Bay and Blaine area represented a logical geographic sub-area. While the 1987 plan left much of the 1977 plan intact, the new plan reflected the County's desire to integrate local community thinking with a regional approach.

### **Whatcom County Comprehensive Plan 1997**

This planning effort reflected a county-wide implementation of the goals, policies and procedures of the 1990 Washington State Growth Management Act. The plan was the first to be formatted around the thirteen required Growth Management Act goals. It included extensive citizen involvement resulting in a support document titled Visioning Community Value Statements. The plan also included a major review of existing Urban Growth Areas. As a result of this planning process, the concept of short and long term land use designations was implemented as part of Birch Bay's Urban Growth Area.

### **Birch Bay Economic Development Action Plan 2000**

In addition to the above plans, the Birch Bay Chamber of Commerce facilitated preparation of the Birch Bay Economic Development Action Plan, which was completed and published in the fall of 2000. The plan was

**Figure 3-2  
Existing Urban Growth Areas**

## PLANNING PROCESS

overseen by a committee called the Birch Bay Planning and Development Group and was funded by the Port of Bellingham. The Group consisted of a cross section of residents, the business community, and representatives from various organizations and public agencies. The Plan's primary funding came from the Port of Bellingham with additional funds provided by the Trillium Corporation to conduct a community survey. The Plan, as its name implies, had an original goal of mapping out economic development and marketing strategies. As the process evolved, it became clear to the Group that more comprehensive planning was needed before effective economic development plans could be implemented. Before the Group disbanded in December of 2000, they initiated the structure and funding for the 2002 Birch Bay Community Plan update. Some of the important accomplishments of the group included:

- A Vision Statement of what Birch Bay could be in the year 2020
- A community attitude survey to help prioritize planning efforts.
- The establishment of a recommended planning area and ten Neighborhoods within the area.
- The establishment of a partnership with various Stakeholders to provide needed funds and expertise.
- A primary relationship with the Whatcom County Planning and Development Services Department so that the Community Plan could become, without extensive additional work, a part of a 2003 update of Whatcom County's Comprehensive Plan.

### **Birch Bay Shoreline Planning 1999**

In 1999, the Birch Bay Chamber of Commerce began a commitment to enhance Birch Bay's shoreline and raised funds to hire a consultant for design work and implementation strategies. The effort was centered on reviving a concept developed in a 1975 Birch Bay Shore Resource Analysis by Wolf Bauer. In addition to an analysis of the geohydraulic characteristics of the bay waters and shoreline, the study recommended the establishment of a shoreline sand and cobble berm as a storm defense alternative to bulkheads, rip rapping, gabions and concrete groins. In 1982, as a result of major storm damage to Birch Bay Drive and adjacent properties, a berm



was created from the mouth of Terrell Creek to the south boundary of Jacobs Landing Condominiums. Besides acting as effective protection from storms, the berm has the added benefit of creating additional shoreland for public pedestrian use.

In light of new shoreline regulations and restrictions, a grant was sought and received in 2001 from the Coastal Zone Management Act Program under sponsorship of the Washington State Department of Ecology and the Whatcom County Council of Governments. Under grant requirements, a Birch Bay Shoreline Enhancement Citizen Advisory Committee was established to provide input to a Technical Committee made up of, among others, Department of Ecology, Washington State Fish and Wildlife Department, Department of Natural Resources, Whatcom County Planning and Development Services, and Whatcom County Public Works Department. A great deal of inventory data has been assembled utilizing the volunteer efforts of the Citizen Committee. The data analysis and study recommendations are being conducted by the Technical Committee, leading to a goal of improving the beach environment through the creation of beach berms and removal of some or all of the existing cement groins. This planning effort was completed in 2003.

## Planning Organization

### Neighborhoods

To better coordinate community and citizen involvement, the Planning Area was divided into ten neighborhoods as shown in Figure 3-3. Throughout the process, the neighborhoods have been the building blocks in preparing the Plan.

Each neighborhood has its own characteristic and geographic identity. For example, people living in the Point Whitehorn neighborhood, clearly identify themselves as Point Whitehorn people of Birch Bay. Table 3-1 gives the number of acres and the year 2000 population in each neighborhood.

Population in each neighborhood varies. For example, the year 2000 US Census counted population in the Birch Bay Village Reach neighborhood amounts to 1,031 persons. The population in the Point Whitehorn neighborhood amounted to 388 persons. West Cherry Point Neighborhood had no residences and therefore zero population.

## PLANNING PROCESS

**Table 3-1**  
**Neighborhood Acreage**

Neighborhood	Number of Acres	2000 Population
Birch Point	721	51
Birch Bay Village Reach	444	1,031
Cottonwood Reach	622	946
Hillsdale	812	677
Central Reaches	397	428
Central Uplands	2,275	733
State Park Reach	688	169
Terrell Creek	1,300	62
Point Whitehorn	546	388
West Cherry Point	894	--
<b>Total</b>	<b>8,699</b>	<b>4,485</b>

### Steering Committee

To direct the preparation of the Birch Bay community plan or sub-area plan, the Birch Bay community created a Steering Committee, composed of elected representatives from each of the ten neighborhoods. The Steering Committee elected from amongst themselves a Chairman and Vice-Chairman. The Steering Committee is made up of representatives as shown below:

Chairman  
Vice-Chairman

Neighborhood Representatives

Birch Point (2)  
Birch Bay Village Reach (2)  
Cottonwood Reach (2)

**Figure 3-3  
Birch Bay Community and Neighborhoods**

## PLANNING PROCESS

Hillsdale (2)  
Central Uplands (2)  
Central Reaches (2)  
State Park Reach (2)  
Terrell Creek (2)  
Point Whitehorn (2)  
West Cherry Point (1)

### Stakeholders

The planning process was financed by a group of eleven Stakeholders. In addition to contributing their funds, the Stakeholders also contributed their expertise and in-kind services. For example, Whatcom County contributed map making and printing services, in addition to contributing their expert planning advice. The eleven Stakeholders are listed below:

- Birch Bay Chamber of Commerce
- Blaine School District
- Brown and Cole Stores
- BP – Cherry Point
- Port of Bellingham
- Trillium Corporation
- Washington State Department of Ecology
- Whatcom County Planning & Development Services
- Whatcom County Fire District # 7
- Whatcom County Fire District # 13
- Williams Energy

### Whatcom County

The Whatcom County Planning and Development Services Department agreed to act as an administrator for the planning process, providing Interlocal Agreements with Stakeholders, billing and budgeting service, and absorbing mailing and printing costs. The County also provides technical oversight and guidance to the Steering Committee.

### Consultants

Kask Consulting, Inc. was selected as the lead consultant to prepare the Plan with sub consultant involvement of J. Patrick Milliken and James Zervas and Associates. James Wiggins was retained by the Washington State Department of Ecology to prepare a reconnaissance level survey of wetlands in the Birch Bay planning area.

## Planning Process

### Overview

In September 2000 a Birch Bay Economic Action Plan was published. The Plan was the results of a years work by a citizen-based Birch Bay Planning & Development Group with facilitation and funding by the Port of Bellingham. One of the primary recommendations of this Plan was that the community goes through a more comprehensive planning process. In early January 2001 just over 5,000 invitation letters to participate in the process were mailed to property owners in the planning area, 37% to Birch Bay addresses and 37% to Canada. Over 600 different property owners and residents have either attended meetings or indicated their desire to be kept informed of progress via E-mail or postal service.

A number of public agencies and the private sector have committed to act as Stakeholders providing both funding and expertise. This plan is titled the Birch Bay Community Plan and, as such, is a stand-alone document. The Birch Bay Community Plan has been prepared in close cooperation with the Whatcom County Planning and Development Services Department. The intended result is that the Birch Bay Community Plan that will be the major input to Whatcom County's 2003 Comprehensive Plan update.

### Neighborhoods

The planning process began on 27 January 2001 when about 300 Birch Bay property owners and residents attended a meeting to introduce the process and to invite community and citizen participation in neighborhood meetings. Initial neighborhood meetings were held in February and March of 2001 and focused on the following:

## PLANNING PROCESS

- a) Finalizing neighborhood boundaries
- b) Identification of neighborhood values and issues
- c) Selection of neighborhood Steering Committee members.

In April the consultants prepared baseline data and draft materials for presentation at neighborhood meetings. Beginning in May, and throughout the process, neighborhoods reviewed and commented on the various planning elements. In the fall, the process evolved from individual neighborhood meetings to groupings of neighborhoods to deal with issues relating to southern, central and northern Birch Bay areas. And finally, draft plan recommendations were presented to the community at large for review and comment.

### Steering Committee

Steering Committee members had their initial meeting on 14 March 2001 having accepted the responsibility to represent their neighborhood. Having two representatives and an alternate from each neighborhood provided a structure which better assured cross sectional representation and higher attendance at meetings. The Steering Committee and the citizens at large are to be congratulated for not only attending many meetings, but also for reading a great deal of material and participating in thoughtful, constructive discussion. A summary of meetings, rosters and attendance is on file with Whatcom County Planning & Development Services.

### General Public

In addition to the Neighborhood meetings and the Steering Committee meetings, there were three general public or community meetings. At these meetings, the general public was invited to review the planning work completed to date, to ask questions and provide their comments on issues of concern to them.

### Plan Adoption Process

#### Steering Committee

Throughout the planning process, all direction to the consultants was given either by Steering Committee consensus or by voting on motions. As drafts were prepared, they were presented and reviewed at neighborhood and community meetings prior to action by the Steering Committee. The Steering Committee adopted the plan on 28 August 2002. The Steering Committee made minor amendments on February 26, 2003. Additionally, on April 23, 2003, the Steering Committee voted to “put the West Cherry Point Neighborhood on a separate track from the balance of the Birch Bay Community Plan.”

#### Whatcom County

After the Birch Bay Community Plan was adopted by the Steering Committee, the Whatcom County Planning Commission began its review of the adopted Plan as a Sub-Area element of the County’s Comprehensive Plan. The Planning Commission conducted two public hearings as part of their review and then forward the Plan as amended to the County Council for final approval. Upon receipt from the Planning Commission, the Whatcom County Council will vote on whether to adopt the Sub-Area element, as presented, as an official component of the County’s Comprehensive Plan update. The Council may make changes and may conduct their own public hearings. The County Council action is anticipated sometime in 2004.

#### Washington State Office of Community Development

The Whatcom County Comprehensive Plan, containing the Birch Bay Sub-Area or Community Plan will be reviewed for consistency with the Growth Management Act by the Washington State Office of Community Development. All cities and counties Comprehensive Plans are required by the Growth Management Act procedure to be updated by December 2004. The Office of Community Development acts as the administrator for the Growth Management Act compliance.

### Appeals Procedure

There are a number of appeals processes built into the planning process. If a citizen, a business, a property owner or an organization does not like what they see, they can appeal, in written form, to the Steering Committee for a specific action. If they fail to persuade the Steering Committee to see their way, they can appeal to the Whatcom County Planning Commission when they review the work of the Steering Committee. If they fail to persuade the Planning Commission, they can appeal to the Whatcom County Council. The next appeal after the Whatcom County Council is to the Washington State Growth Management Hearings Board for Western Washington. Any appeals after that need to go to a Superior Court in the State of Washington.

### Environmental Documentation

Before the Whatcom County Council can adopt the County's Comprehensive Plan, containing the Birch Bay Community or Sub-Area Plan, the Council must subject the entire Plan to environmental review in accordance with the Washington State Environmental Policy Act. The environmental review is the responsibility of the County. On July 7, 2003 the Whatcom County SEPA Administrator issued a Determination of Nonsignificance (DNS) for adoption of the Birch Bay Community Plan. The SEPA Administrator re-affirmed that determination on June 14, 2004 and again on September 3, 2004.

### Plan Implementation

Many of the Plan recommendations, once they are adopted by the Whatcom County Council, become substantive changes in the County's Development Regulations, such as the Zoning Code or Subdivision Code. The responsibility to see that policy changes are carried through and are made part of the Development Regulations is the responsibility of the County Planning and Development Services Department. Any significant changes to the County's Development Regulations must go through a public review and environmental review process of their own.



## Chapter 4

# COMMUNITY PROFILE

## Development Patterns and History

According to the 1987 Birch Bay – Blaine Subarea Background Document, the original inhabitants of the planning area were primarily the Semiahmoo tribe who resided, fished, harvested shellfish, and hunted in all of the planning area north of Point Whitehorn. Lummi tribal territory included the area that is today's Cherry Point urban growth area. While there may have been earlier explorations by Europeans and others, the most referenced early account of Birch Bay is from the Menzies journal compiled during the Vancouver expedition in 1792. The expedition named the area Birch Bay after the predominance of birches along the shoreline and uplands. By the end of the 1800s, the Semiahmoo tribe had left the area due primarily to raids from tribes to the north and by increasing white settlement.

The early explorers and settlers were attracted to the area by the abundance of natural resources. Exposure to Birch Bay was increased by a short-lived increase in population in Blaine stemming from the Fraser Valley gold rush of 1858/59. In the 1870s, homesteading brought a second influx of settlers resulting in a Birch Bay post office and an intent to incorporate as the city of Birch Point, based mainly on an expectation of serving as a terminus for the Union Pacific Railway. Wharves were built and hotel construction had begun in Birch Bay when prospects for the railroad terminus died, along with incorporation efforts.

In 1921, the Peace Arch Monument at the border was constructed and marked the beginning of Birch Bay's efforts to become a tourism-based economy. Depletion of natural resources, mainly timber, and the effect on the fishing industry from the outlawing of fish traps, provided motivation to become a destination resort. These efforts were not successful and Birch Bay settled into a pattern of summer homes and cottages until tourism came back with the end of World War II. Economic stability was somewhat enhanced by the establishment of the Blaine Air Force Base in 1951 and the industrial development at Cherry Point beginning with the Mobil Oil refinery in 1954, then the opening of Intalco Aluminum in 1966 and the ARCO refinery in 1971.

Summer resort activity evolved through the 1970s to include mobile home and RV Parks and condominiums as well as the traditional rental cabins and cottages. Beginning in the 1980s, Birch Bay felt the effects of a national recession

and in the mid 1990s, the Canadian tourism market, which was the cornerstone of the local economy, began to ebb as Canadian currency devalued.

### The Canadian Factor

One cannot understand Birch Bay without recognizing the close, long term ties to Canada both economically and culturally. In the early 1990s, about 51 % of land parcels within the planning area were in Canadian ownership. In 2001, Canadian ownership had dropped to about 37 %. Canadian retail sales in Whatcom County, prior to currency devaluation, were about 33 %. Current Canadian retail sales amount to about 10 %. Border issues, heightened by the 11 September 2001 terrorist events have created additional barriers for Canadian visits to Birch Bay.

By the late 1970s, Birch Bay reached its peak in terms of having an identity as a destination resort community. Seasonal cabin, cottage, mobile home and RV park ownership and rental markets were strong. Condominium second home ownership was emerging as a market force. Day visits were a major part of the tourism local economy supported by a major State Park, roller rink, amusement park, public swimming pool, golf and various taverns (Until 1986 Sunday liquor sales were not available in British Columbia). These activities in addition to traditional crabbing, clamming, swimming and sunbathing beach-oriented recreation created a party-like atmosphere.

Today, Birch Bay has a different atmosphere with year round residential and American ownership gradually taking the place of a seasonal and Canadian atmosphere. Tourism, recreation related activities are more passive in nature as evidenced by the disappearance of the roller rink, amusement park, public pool and much of the tavern market. However, the bond to Canada remains and if currency and border issues change, there is no reason to expect that there would not be a resurgence, at some level, of a stronger Canadian presence in Birch Bay. Underlying the economic link is that of positive, long-term Canadian and American relationships built at the neighborhood and family levels, some going back three, and even four generations. Those relationships based on the motto inscribed on the Peace Arch Monument "Children of a Common Mother," are important cornerstones of Birch Bay's history.

### Demographic Profile

In July 2001, the Washington State Office of Financial Management published the most recent US Census released data on demographics. Table 4-1 presents a demographic profile of the Birch Bay Census Designated Place. Table

## COMMUNITY PROFILE

4-1 also presents a demographic profile for Whatcom County and the State of Washington as a whole. By having these two additional profiles, one can make comparisons of Birch Bay with the County and the State as whole.

**Table 4-1**  
**Demographic Profile**  
**Birch Bay Census Designated Place**  
**Year 2000 Census**

<b>Data</b>	<b>Birch Bay CDP*</b>	<b>Whatcom County</b>	<b>State of Washington</b>
Total population	4,961	166,814	5,894,121
Sex and age			
Male	2,448	82,188	2,934,300
Female	2,513	84,626	2,959,821
Children under age 18	1,153	40,247	1,513,843
Under 5 years old	310	10,210	394,306
5 to 18 years old	843	30,037	1,119,537
Adults 18 years and over	3,808	126,567	4,380,278
62 years and older	955	22,757	782,897
65 years and older	788	19,400	662,148
Median age	40.7	34.0	35.3
Race			
White	4,582	147,485	4,821,823
African American	52	1,150	190,267
Native American	59	4,709	93,301
Asian	61	4,637	322,335
Pacific Islander	7	235	23,953
Other race	95	4,159	228,923
Two or more races	105	4,439	213,519
Hispanic or Latino	221	8,687	441,509

## COMMUNITY PROFILE

**Table 4-1 - cont.**  
**Demographic Profile**  
**Birch Bay Census Designated Place**  
**Year 2000 Census**

<b>Data</b>	<b>Birch Bay CDP*</b>	<b>Whatcom County</b>	<b>State of Washington</b>
Households			
Total households	2,125	64,446	2,271,398
Family households	1,417	41,094	1,499,127
Nonfamily households	708	23,352	772,271
65 years and over	549	13,466	184,924
Average household size	2.33	2.51	2.53
Average family size	2.80	3.03	3.07
Housing units			
Total housing units	5,105	73,893	2,451,075
Occupied	2,125	64,446	2,271,398
Vacant	2,960	9,447	179,677
Seasonal / occasional use	2,620	5,946	60,355
Vacancy rate			
Home owner	6.0	2.2	1.8
Rental	21.1	5.7	5.9
Occupied housing units			
Owner occupied	1,614	40,876	1,467,009
Renter occupied	511	23,570	804,389
Average household size			
Owner occupied	2.28	2.63	2.65
Renter occupied	2.49	2.31	2.32

\* CDP - Census Designated Place

## Neighborhood Profiles

As shown in the preceding chapter on Figure 3-3, ten neighborhoods were established for the planning process. The first three rounds of neighborhood meetings, held early in the planning process, focused on what residents value about their neighborhood and community and what issues need to be resolved.

## Neighborhood Values

Extensive discussions were held with each neighborhood to determine their concerns and values. The values identified by each neighborhood are listed below.

### **Birch Point**

- Rural & secluded
- 20 minutes from urban life yet get away feeling

### **Birch Bay Village Reach**

- Quiet
- Gated – good security
- Amenities – i.e. golf course, marina, water views
- Pride of ownership – well maintained

### **Hillsdale**

- Country lifestyle
- Middle income housing

### **Cottonwood Reach**

- Quiet
- Residential atmosphere – friendly
- Beach views & sunsets
- Diversity of homes

### **Central Reaches**

- Quiet
- Beach views & sunsets
- Beach activities & sea-life
- Resort atmosphere - fun

### **Central Uplands**

- Quiet / open space feeling
- Views
- Affordable housing
- Slow development

## COMMUNITY PROFILE

### **State Park Reach**

- Beach amenities
- Views & sunsets
- Quite & friendly
- Waterfront home atmosphere

### **Terrell Creek**

- Rural & quiet
- Rural zoning
- Good habitat for wildlife
- Natural creek basin

### **Point Whitehorn**

- Quiet & peaceful
- Views & sunsets
- Single family home atmosphere
- Neighborhood pride of maintenance

## **Population and Land Area**

Early in the planning process, the consultant team assembled a baseline data report, for each Neighborhood. Each baseline data report contained existing data on land use, housing, population, shorelines, critical areas, wetlands, transportation facilities, water, sewer, stormwater facilities, fire services, police services, parks and recreation facilities, and schools. The baseline data reports contain tables, graphs, and maps. Further, each baseline data report contains an extensive bibliography of planning documents associated with or related to the Birch Bay area. Table 4-2, on the following page, presents a summary of land area and population for each neighborhood.

Each neighborhood baseline data report also contained an identification and discussion of neighborhood values. A summary of the neighborhood values has been presented above under the title "Neighborhood Values."

## COMMUNITY PROFILE

**Table 4-2**  
**Neighborhood Acreage and Population**

Neighborhood	Number of Acres	2000 Population
Birch Point	721	51
Birch Bay Village Reach	444	1,031
Cottonwood Reach	622	946
Hillsdale	812	677
Central Reaches	397	428
Central Uplands	2,275	733
State Park Reach	688	169
Terrell Creek	1,300	62
Point Whitehorn	546	388
West Cherry Point	894	--
<b>Total</b>	<b>8,699</b>	<b>4,485</b>

## Chapter 5

# VISION, GOALS AND POLICIES

## Overview

There are three levels of visions, goals and policies to guide the development of comprehensive plans:

- Washington State Growth Management Act Goals
- Whatcom County Visions, Goals and Policies
- Birch Bay Community Visions, Goals and Policies

## Washington State Growth Management Act Goals

In 1990, the Washington State Legislature passed the Growth Management Act (RCW 36.70A) and the accompanying Chapter 365-190 WAC - Minimum Guidelines To Classify Agriculture, Forest, Mineral Lands And Critical Areas. The Growth Management Act (GMA) provides thirteen goals to guide the development and adoption of comprehensive plans and the development regulations of those counties and cities that are required or choose to plan under [RCW 36.70A.040](#). The goals are:

1. **Urban growth:** Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.
2. **Reduce sprawl:** Reduce the inappropriate conversion of undeveloped land into sprawling, low-density development.
3. **Transportation:** Encourage efficient multimodal transportation systems that are based on regional priorities and coordinated with county and city comprehensive plans.
4. **Housing:** Encourage the availability of affordable housing to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock.



## VISION - GOALS - POLICIES

5. **Economic development:** Encourage economic development throughout the state that is consistent with adopted comprehensive plans, promote economic opportunity for all citizens of this state, especially for unemployed and for disadvantaged persons, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state's natural resources, public services, and public facilities.
6. **Property rights:** Private property shall not be taken for public use without just compensation having been made. The property rights of landowners shall be protected from arbitrary and discriminatory actions.
7. **Permits:** Applications for both state and local government permits should be processed in a timely and fair manner to ensure predictability.
8. **Natural resource industries:** Maintain and enhance natural resource-based industries, including productive timber, agricultural, and fisheries industries. Encourage the conservation of productive forest lands and productive agricultural lands, and discourage incompatible uses.
9. **Open space and recreation:** Encourage the retention of open space and development of recreational opportunities, conserve fish and wildlife habitat, increase access to natural resource lands and water, and develop parks.
10. **Environment:** Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.
11. **Citizen participation and coordination:** Encourage the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to reconcile conflicts.
12. **Public facilities and services:** Ensure that those public facilities and services necessary to support development shall be adequate to serve the development at the time the development is available for occupancy and use without decreasing current service levels below locally established minimum standards.

13. **Historic preservation:** Identify and encourage the preservation of lands, sites, and structures that have historical or archaeological significance.
14. **Shoreline Management.** Per RCW 36.70A.480 Shorelines of the State, the goals and policies of the Shoreline Management Act, as set forth in RCW 90.58.020, are added as one of the goals of the Growth Management Act.

### Whatcom County Visions, Goals and Policies

In April 1993, the Whatcom County Council adopted County-wide Planning Policies (Revised March 1997). These policies were formulated in conjunction with all of the incorporated cities of Whatcom County and are built into each element of the County's 1997 Comprehensive Plan.

Also, in April 1993, the County Executive appointed a cross-sectional citizen committee to a project called Whatcom County: The Next Generation. Their charge was to produce a graphic and written description of what the people of Whatcom County wanted the county to be in the year 2010. The committee used a variety of techniques to accomplish their mission including questionnaires at the County Fair, distribution of surveys through various organizations, and a statistically valid county-wide phone survey. The end result was a set of Visioning Community Value Statements.

### Birch Bay Community Visions, Goals and Policies

The Birch Bay Vision, Goals and Policies for this plan are derived from:

- Discussion at neighborhood and Steering Committee meetings held to date.
- Past Comprehensive Plans.
- The Birch Bay Community Vision Statement from the Birch Bay Economic Development Action Plan, September 2000.
- The Birch Bay Community Attitudes Survey by Hebert & Associates, June 2000.

- Washington State GMA Goals and Whatcom County Goals and Policies.

### Vision Statement

Birch Bay's Community Goals and Policies are based on the following Vision Statement.

**Preamble.** The Vision Statement is a verbal snapshot of Birch Bay Community in the year 2020. It summarizes the desired character and characteristics of our Community and provides the ultimate goal for all of our Community planning and development efforts. The vision statement is intended to be realistic, yet is more than a mere prediction. Rather than describing the features of Birch Bay Community as we think they are likely to be, it expresses what we would like our Community to become and believe we can achieve. It acknowledges past and current trends in Birch Bay Community's relationship to external factors, but also assumes an ability to shape the future in a positive way. The Vision Statement, therefore, is optimistic; affirming and enhancing the best of our past and existing attributes and aspiring for those we now lack but hope to have.

**We the People of Birch Bay.** We the people of Birch Bay hereby set forth a vision statement and pledge our commitment to achieve a common vision for the future of the Birch Bay Community. We the people of Birch Bay have identified a set of central values which we as a Community hold in common:

- We believe that the essence of a prosperous and vibrant Community is found not in its structures but in the collective spirit of those who live and work within the Community. We hold that the built aspects of a community - its transportation network, utility system, buildings and other facilities - should not be considered ends in themselves, but as means for enhancing the quality of life and enriching the human spirit.
- We respect the picturesque setting of Birch Bay and believe that any development along its shores must achieve harmony between this natural and man-made environment.
- We believe that certain controls on the choices of individual

action are appropriate to ensure that the community's best interests are realized.

- We believe that human activities should be considered as one component of a complex system of relationships among living things and their environment and that we have a responsibility to ourselves and to future generations to seek a mutually supportive balance within this system.

### Our Vision for Birch Bay

#### **1. Residential, Recreational, Resort Community.**

Birch Bay in 2020 is an attractive, vibrant, and inviting Community in which to live, work and vacation. The Community has maintained a balance between residential development and tourism related activities. Our neighborhoods are secure and stable, creating the foundation for our quality of life. They also have variety both in population and land use. People from all economic, age and ethnic groups live here. New businesses and high-tech industries have moved into our Community, providing shopping and employment opportunities for our residents. Serving the tourist population continues to be one of the primary economic activities of the Community. Tourism that was primarily a summer phenomenon is now occurring year round. Recreational vehicle parks continue to be popular, particularly during the summertime. The commercial area of the shoreline, has become a blend of successful gift shops, art galleries and restaurants, some of which combine first floor commerce with upper story residences and/or office spaces. In addition, the shoreline supports hotel and condominium housing which have been carefully located to protect views and provide on-site open spaces to soften the visual impact of building size.

The people in the Birch Bay Community, in search of self determination and maintenance of its vision come together as the Community of Birch Bay. The Community of Birch Bay has quickly gained prominence among communities in Whatcom County and is widely known as a place where scenic beauty is harmonized with urban development and job creating activities. Birch Bay, the natural saltwater inlet or bay is and remains to be the “soul” and the “heart” of the Community.

**2. Land Use and Development.** Land use and development patterns have changed significantly over the years. Tourist

related developments such as hotels, motels, time-share condominiums, recreation vehicle parks, restaurants and other tourist related service facilities have been built along Birch Bay Drive, capturing the marine view of Birch Bay. The new tourist service related facilities have replaced some of the existing single-family residential uses along Birch Bay Drive. At the same time, much of Birch Bay Drive remains in single-family residential use. Commercial development, serving the resident population, is dispersed throughout the Community at specific nodes along the intersections of major roads and streets. Newly created employment centers, including high-tech industry, have chosen to locate adjacent to the numerous wetland areas creating idyllic campus-like setting. Residential development has retained its high-ground location, capturing the views of Birch Bay. Additional residential development has taken place in planned communities or subdivisions ranging in size of a few homes to hundreds.

**3. Public Spaces.** Public spaces, namely parks, open space, pedestrian and bicycle trails, and recreation sites have increased significantly during the past twenty years. The new pedestrian and bicycle trail, running from the Canadian border to Bellingham and south, has gained in popularity. Pedestrians and bicyclists along the trail stop at Birch Bay for restaurant and other services, contributing to the economy of the Community. Open space has been set aside and parks and recreation facilities have tended to locate near or adjacent to wetland sites. Appreciation and respect for Birch Bay historic and archeological cultural resources has been woven into community policies and planning.

**4. Transportation.** East-west traffic movement between Birch Bay and I-5, that has been a problem for years, has improved significantly. Birch Bay - Lynden Road and Grandview Road, have been widened by providing adequate shoulders and center left-turn lanes. Blaine Road also functions as a north-south collector/distributor road taking the traffic load off Birch Bay Drive, leaving it for local access traffic and for bicycles and pedestrians. A number of pay parking lots have appeared east of Birch Bay Drive, camouflaged and tucked away behind commercial facilities with their storefronts facing Birch Bay Drive. Bus service has improved considerably, enabling workers to travel to out-of-the-area job locations in Semiahmoo, Blaine, BP and Bellingham. Pedestrian and bicycle trails have become an integral part of all major road improvements. For example, along the trail, bicyclists can now travel, in their own right-of-way from the Canadian border to Bellingham and further south. Birch Bay Drive, which used to function as a north-south arterial road, now has

## VISION - GOALS - POLICIES

resemblance to a beach-front promenade, integrating the people oriented development on the east side of the Drive with the water oriented activities on the west side.

**5. Utilities.** Endless supply of fresh water, that was taken for granted many years ago, no longer exists. The Birch Bay Water and Sewer District has been able to meet the growing fresh water demand by a combination of increasing its supply, curtailing its use by conservation measures and using treated wastewater to irrigate golf courses and supply industrial users. The wastewater collection system has been expanded and the treatment plant has been enlarged. All of the troubled septic systems along Drayton Harbor have been corrected, either by connecting them to the sewer system or by modernizing their operations through technological advances. Improved utility systems have significantly improved the water quality conditions in Drayton Harbor. Oyster growers are again bringing in abundant healthy crops.

**6. Education.** Birch Bay now has a school. The Blaine School District has built an elementary school in the area and has named it Birch Bay School. It is centrally located, adjacent to other civic buildings and recreational facilities. The school is a high-tech center, not only for elementary students but also for adults taking evening courses in arts and other humanities and improving their internet skills. The school is also equipped with a sizable auditorium and meeting rooms, functioning as an after-school community center. Fiber optic cable service that was a rarity a few years ago can now be found spread throughout the Community.

**7. Public Safety.** Crime that periodically raises its ugly head in all communities has subsided considerably in the Birch Bay Community as a result of crime prevention education and increased police presence. Further, the Community has matured; neighbors know their neighbors and neighborhood crime watch programs have caught on. Fire service has also improved. Fire and emergency medical response time has decreased considerably due to having constructed additional fire stations and staffing them with full-time fire and emergency medical service personnel. As a result of improved fire services, the fire insurance rates on residential structures has decreased significantly. Fire and police safety seminars are being conducted throughout the community on a regular basis.

**8. Economic Development.** The economy of Birch Bay Community has increased considerably over the years. Tourists demand for hotel and motel space has created additional jobs. Cherry Point continues

to be an important employment center providing jobs to many of the Community's residents. High-tech industry, particularly light manufacturing, has discovered Birch Bay. Small plants and operations have located in commercially zoned areas throughout the Birch Bay Community, providing year-round family wage jobs. The additional population, jobs in the hotel industry, high-tech, and light manufacturing, all have created additional jobs in the service industry, such as restaurants, convenience and specialty stores, personal services operations, and services to businesses and residences.

### **Birch Bay Community Goals and Policies:**

#### **A. Community and Civic Identity**

- Goal CC 1: To enact planning goals, policies and regulations that fulfill the Birch Bay sense of place established in the Community Vision Statement.
- Goal CC 2: To establish and maintain neighborhoods that protect and enhance visions shared by residents of each neighborhood.
- Goal CC 3: To establish gateway entries that initiate a sense of the community's appreciation of its natural setting and friendliness.
- Goal CC 4: To create a civic center(s) that provides public leadership by example for private development and that provides a vibrant sense of community by emphasizing open space, landscaping, views and the provision of quality community and cultural events.
- Goal CC 5: To assure that commercial and residential development along the shoreline reflects the community's commitment to stewardship of the beach environment.
- Goal CC 6: To integrate a high standard of pedestrian access in residential, commercial, public facility and road planning.

Goal CC 7: To recognize the importance of having landscaping and street tree programs fully and cohesively integrated into public and private development.

### **B. Land Use**

Goal LU 1: To encourage development that fosters the community's long range vision of blending tourism related commercial use of land while maintaining a quality residential atmosphere.

Policy LU-1a: Provide sufficient and appropriately located residential and commercial lands. (WCCP)

Policy LU-1b: Provide a range of land uses which considers locational and market factors as well as required quantities of land. (WCCP)

Policy LU-1c: Assure that commercial development be contained within identified commercial nodes in order to avoid lineal commercial strips along arterials.

Policy LU-1d: Recognize the importance of tourism marketing that accentuates an appreciation of the aesthetics and natural features of the marine environment and its influence on various types of development.

Policy LU-1e: In accordance with community goals for a residential and passive tourism atmosphere, place requirements on development which provide an emphasis on pedestrian access, view protection and regulations regarding upkeep of RVs and second homes.

Policy LU-1f: Discourage non-resort commercial activity along the shoreline other than



## VISION - GOALS - POLICIES

that needed to provide for tourism related services.

Policy LU-1g: To avoid sprawl, adopt minimum residential densities of 4 units per developable acre in single-family residential areas and 10 units per developable acre in multi-family areas.

Policy LU-1h: Require land owners who obtain increased density through UGA expansion to purchase or transfer development rights from TDR sending areas designated under the Whatcom County Transfer of Development Rights (TDR) Program.

Goal LU 2: To encourage development that complements each neighborhood's existing and/or desired character.

Policy LU-2a: Identify and protect cultural and physical assets of each neighborhood. These assets should be defined through periodic neighborhood surveys and workshops.

Policy LU-2b: Maintain neighborhood character by enacting flexible design standards and incentives that ensure compatibility as infill occurs.

Policy LU-2c: Provide Planned Unit Development, density bonuses and clustering regulations that encourage preservation and enhancement of neighborhood values and assets.

### **C. Housing**

Goal HO 1: To provide a mix of housing that reflects the residential and resort atmosphere of the community and that enhances individual neighborhood vitality.

## VISION - GOALS - POLICIES

Policy HO-1a: Provide for a range of income levels. In addition, there should be diversity in design while maintaining a commitment to quality.

Policy HO-1b: To encourage and provide incentives for housing projects that preserve natural resources, view sheds and wildlife habitat.

Policy HO-1c: To encourage and provide incentives for housing projects that help to foster pedestrian and bicycle access to both neighborhood commercial centers and community facilities.

Policy HO-1d: To encourage and provide incentives that emphasize energy efficient homes, businesses and community facilities.

Goal HO 2: To recognize that a key component to achieving the community's vision is the manner in which affordable housing is provided and maintained.

Policy HO-2a: Provide incentives and subsidies to preserve, while enhancing, existing affordable housing.

Policy HO-2b: Encourage multifamily and/or smaller lot size housing that meets the needs of special populations and that are located near support services and community facilities.

Policy HO-2c: Explore all available federal, state, local and private options for financing affordable and special needs housing.

Policy HO-2d: Implement programs and regulations for education, encouragement and enforcement related to the upkeep of

permanent and seasonal single family houses and mobile homes.

### **D. Shorelines**

Goal SL 1: To protect and enhance Birch Bay's shorelines for the benefit of current and future generations.

Policy SL-1a: Recognize that Birch Bay, from Point Whitehorn to Birch Point, is the only Whatcom County marine shoreline designated by the Washington State Shoreline Management Program as a Shoreline of Statewide Significance and as such requires a heightened sense of stewardship.

Policy SL-1b: Emphasize the existing restrictions on man-made alterations on all near shore lands.

Policy SL-1c: Commercial activity should be discouraged along the shoreline other than that designated for the provision of resort commercial related services.

Policy SL-1d: When considering set backs and height restrictions, allow flexibility in order to protect views, provide open space and public access.

Policy SL-1e: Provide for strategies and funding to delineate in more detail shoreline associated wetlands, stormwater issues, hazardous areas and any other environmentally sensitive issues.

Goal SL 2: To enhance public access to the Birch Bay shoreline while maintaining a commitment to the rights of private property owners.

Policy SL-2a: Commit to increased awareness of and access to inventories and records that

## VISION - GOALS - POLICIES

provide information on tideland and nearshore ownerships and covenants.

Policy SL-2b: Do the same for public and quasi public rights-of-way for backshore trail corridors that link to tideland and nearshore public access.

Policy SL-2c: Commit to quantifying and addressing problems experienced by private shoreline property owners due to public access.

Policy SL-2d: Commit to the acquisition or preservation, through other means, of the undeveloped property on the spit at the mouth of Terrell Creek.

Policy SL-2e. Designate important shoreline areas in Birch Bay as “sending areas” for the transfer of development rights under the Whatcom County Transfer of Development Rights (TDR) program.

### **E. Critical Areas**

Goal CA 1: To commit to conservation and enhancement of critical areas for long-range benefit to all concerned.

Policy CA-1a: Protect and enhance natural systems that support native fish and wildlife populations and habitat. (WCCP)

Policy CA-1b: Ensure the continued existence and enhancement of fish and wildlife populations by protecting and conserving valuable fish and wildlife habitat. (CAO)

Policy CA-1c: Encourage the preservation of natural river and stream functions that support fish and wildlife populations

## VISION - GOALS - POLICIES

and preserve marine shorelines.  
(CAO)

Policy CA-1d: Designate critical areas and buffers in Birch Bay as “sending areas” for the transfer of development rights under the Whatcom County Transfer of Development Rights program.

Policy CA-1e: Adopt an interim ordinance to require:

1. on-site mitigation for all wetland disturbance or fill within the Birch Bay Urban Growth Area until the County updates the Whatcom County Critical Area Ordinance, projected by the end of 2004; and
2. no net loss of area and function of wetlands, including the function of stormwater attenuation/runoff control at a level that existed on each project site in its pre-development condition.

Goal CA 2: To commit to careful management of hazardous areas and flood areas to avoid the high costs of correcting future problems as more development occurs.

### **F. Parks, Recreation And Open Space**

Goal PR 1: To provide parks, trails and open spaces, which meet the needs of year round residents and are compatible with neighborhood needs and desires.

Policy PR-1a: Establish the means to assess and refine the recommendations in this plan in more detail.

Policy PR-1b: Assess community park and recreation desires in a systematic manner at least every five years.

Policy PR-1c: Encourage and facilitate individual neighborhood efforts to identify projects that help to create and

## VISION - GOALS - POLICIES

maintain neighborhood character and cohesiveness.

Policy PR-1d Work cooperatively with the City of Blaine, Whatcom County Parks, the State of Washington, and any other governmental agencies and non-profit/private entities to provide and/or enhance recreation facilities and programs.

Policy PR-1e: Integrate park, trail and open space planning with that of transportation, commercial and housing planning.

Policy PR-1f: Assure that acquisitions of lands and easements assume a willing seller.

Goal PR 2: Recognizing that Birch Bay is one of Washington's Shorelines of Statewide Significance, to develop a long-range course of action that provides for high quality recreation use while protecting the resource itself and respecting the rights and ambiance of private property owners.

Policy PR-2a: Coordinate recreation use of the shoreline with the goals and policies of the Shorelines and Critical Areas element of this plan.

Policy PR-2b: Enhance public access and recreation usage in an environmentally sensitive manner.

Policy PR-2c: Devise methods to balance public/private ownership and recreation usage of the shoreline.

Goal PR 3: To recognize Birch Bay's historic and archaeological attributes and identify and encourage the preservation of lands, sites, and structures that have historic or archaeological significance.

## VISION - GOALS - POLICIES

Policy PR-3a: Prepare a comprehensive cultural resource inventory that incorporates existing archaeological and historic studies pertaining to the planning area.

Policy PR-3b: Work cooperatively, and in close communication, with agencies and organizations to assure consistency and compliance with local, state, and federal cultural resource policies and legislation. Work closely with local Native American archaeological efforts.

Policy PR-3c: Recognize the potential tourism related economic benefits and the educational value of cultural resource preservation and enhancement. Pursue funding sources to realize these benefits.

### **G. Transportation**

Goal TR 1: To reduce unnecessary vehicle traffic on Birch Bay Drive.

Goal TR 2: To provide safer, more appropriate collector routes to the Birch Bay – Lynden Road, Interstate 5 and the City of Blaine.

Goal TR 3: To coordinate local traffic planning with Blaine, Whatcom County, Washington State, the Whatcom County Transportation Authority and other agencies.

Goal TR 4: To become a community that achieves success in providing viable public and alternative transportation to reduce car traffic.

Policy TR-4a: Provide streets and arterials that maximize pedestrian/bicycle use.

Policy TR-4b: Whenever possible, separate vehicle and pedestrian/bicycle traffic.

## VISION - GOALS - POLICIES

Policy TR-4c: Commit to alternative transportation by working closely with WTA and others to establish park-and –ride lots and van pooling programs.

### **H. Utilities**

Goal UT 1: To assure that proposed commercial and housing projects do not jeopardize existing utilities service levels.

Goal UT 2: To provide water and sewerage systems that are safe and that adequately provide for projected growth.

Goal UT 3: To coordinate utility planning with that of Blaine, Whatcom County and other agencies.

Goal UT 4: To implement conservation measures that complement the community's commitment to stewardship of resources and that result in long range economic benefit.

Goal UT 5: To assure that utility corridors are located, built and maintained in a manner that provides the least amount of impact possible on neighborhood and community landscapes.

Policy UT-5a: Explore possibilities to maximize joint utility corridors for both above and below ground lines.

Policy UT-5b: Protect viewsheds wherever and whenever possible.

### **I. Stormwater Management**

Goal SW 1: To protect water resources and natural drainage systems by controlling the quality and quantity of stormwater runoff.

Goal SW 2: To implement stormwater management policies and



## VISION - GOALS - POLICIES

strategies which recognize the value of wetland areas in solving stormwater problems.

Goal SW 3: To implement on-going monitoring of stormwater so that fresh and salt water quality problems can be identified early on.

### **J. Public Safety & Health**

Goal PS 1: To achieve and maintain a community feeling of living in a safe and secure environment.

Goal PS 2: To reduce fire and police response times

Goal PS 3: To promote and encourage citizen involvement in such things as neighborhood watch programs and emergency awareness.

Goal PS 4: To achieve and maintain high standards in providing normal and emergency medical treatment.

Goal PS 5: To work cooperatively with other agencies, especially the City of Blaine, the Blaine School District and Fire Districts 7 and 13 in providing facilities and programs relating to both community education and health.

### **K. Education**

Goal ED 1: To work with the Blaine School District to locate an elementary school in Birch Bay.

Goal ED 2: To foster educational opportunities for all ages and interests.

Goal ED 3: To work cooperatively with other agencies, especially the City of Blaine, the Blaine School District and Fire Districts 7 and 13 in providing facilities and programs relating to both community education and health.

### **L. Economic Development**

- Goal EC 1: To continue the commitment to Birch Bay's primary economic resource – recreation and tourism commerce – while maintaining a commitment to the residential character of the community.
- Goal EC 2: To coordinate economic development with environmental, resource, and other comprehensive land use and open space policies and measures to enhance the community's overall quality of life.
- Goal EC 3: To be committed to providing family-wage jobs within the area and to effectively market Birch Bay as a place for businesses that complement the residential and recreational character of the community.
- Goal EC 4: To ensure adequate infrastructure to support existing and future business development and evolving technology.
- Goal EC 5: To support increased public/private partnering among all entities involved with economic development.

## Chapter 6

# SHORELINES AND SHORELANDS

## Definitions

Whatcom County is required by RCW 90.58 to regulate development in the shorelands and shorelines environment. RCW 90.58.030 defines shorelands, shorelines, and shorelines of state-wide significance as follows:

***"Shorelands or shoreland areas"** means those lands extending landward for two hundred (200) feet in all directions as measured on a horizontal plane from the ordinary high water mark; floodways and contiguous floodplain areas landward two hundred (200) feet from such floodways; and all wetlands and river deltas associated with the streams, lakes, and tidal waters.*

***"Shorelines or shoreline areas"** means all of the water areas of the state, including reservoirs, and their associated shorelands, together with the land underlying them; except (i) shorelines of state-wide significance; (ii) shorelines on segments of stream of a point where the mean annual flow is twenty cubic feet per second or less and the wetlands associated with such upstream segments; and (iii) shorelines on lakes less than twenty acres in size and wetlands associated with such small lakes.*

***"Shorelines of state-wide significance"** means those areas of Puget Sound and adjacent salt waters and the Strait of Juan de Fuca between the ordinary high water mark and the line of extreme low tide: Birch Bay - from Point Whitehorn to Birch Point.*

## Existing Conditions

### Birch Bay Environment

Birch Bay has two shorelines of high significance. One is the saltwater shoreline of Birch Bay itself. The shoreline from Birch Point to Point Whitehorn is the only marine shoreline in Whatcom County, landward of extreme low tide, to be designated a Shoreline of Statewide Significance. The designation includes tidelands, adjacent uplands and associated wetlands within 200 feet of the ordinary high water mark. As such, the State Legislature has declared that statewide interest shall be protected over local

interests. The State's interest coincides with that of Whatcom County and the local community. As a shallow bay estuary with exposed tide flats of up to one mile, the Bay provides for both recreation activity and significant habitat needs for a wide variety of marine life.

The other significant shoreline is the freshwater environment of Terrell Creek. Most of Terrell Creek is designated in the Whatcom County Shoreline Master Program as Natural (inland from the state park marine shore) or Conservancy (the area that parallels the marine shore to the mouth of the creek) meaning that human intrusion is limited. Much of the Terrell Creek watershed has been preserved through public ownership, private ownership dedicated to preservation, and by stringent regulation.

### Shoreline Ownership and Jurisdiction

Historically, shoreline ownership and public vs. private rights, both nationally and at the state level, have been confusing and often contentious. The goals and policies in this section state the community's recognition of the need to accurately depict shoreline/tideland ownership and to continue to work on private/public issues. Tideland ownership boundaries are in one of two basic categories:

- Tidelands patented prior to Washington Statehood (November 11, 1889) in which case the landward boundary is defined as the Government Survey or meander line. Generally, the government meander line attempted to follow the shoreline at the time of the survey. Erosion and/or accretion over the years, in some cases, have changed the location of the tideland boundary.
- Tidelands established after statehood are based on the mean higher high tideline (MHT) if no biological factors are evident.

The Washington State Department of Natural Resources (DNR) owns beach land from the government meander line or the mean high tide line, whichever is further seaward, to the extreme low tide. The property owners, generally, own the uplands and any beach and/or tidelands to the meander line or the mean high tide line. Figure 6-1 shows the location of government owned tidelands in the Birch Bay Planning Area. Tidelands are all given an Aquatic Shoreline Area Designation in the County's Shoreline Master Program, unless a more specific designation has been applied e.g. Seagull Cove is a Natural designation tidal area. The tideland aquatic

Figure 6-1  
Tidelands Ownership

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designation includes the beach area seaward of the ordinary high water mark. All subtidal bottomlands and the overlying water column and surface are also designated Aquatic. The Aquatic Shoreline Area Designation is one of the most protective and restricted environments due to its largely public ownership, natural resource value and aesthetic character. DNR is currently updating and refining tideland ownership. Figure 6-1 should be updated when this mapping is available in 2002.

### Shoreline Classification

The County, in accordance with Chapter 173-26 WAC, has established Shoreline Area Designations each of which provides for appropriate development given the environmental constraints and sensitivity for that area. These designations apply to both salt and fresh water shorelines.

The Birch Bay Planning Area contains a total of 91,576 lineal feet (17.3 miles) of salt and fresh water shoreline regulated by the County's Shoreline Master Program. Table 6-1 is a break down of the lineal feet for these shorelines by neighborhood. Table 6-2 provides saltwater lineal feet by Shoreline Area Designation for each neighborhood. Table 6-3 provides freshwater lineal feet by Designation by neighborhood. Figure 6-2 shows the Shoreline Area Designations.

**Table 6-1  
Birch Bay Shorelines in Feet, Regulated By  
Whatcom County Shoreline Program**

Neighborhood	Saltwater	Freshwater (Terrell Creek)	Total
Birch Point	10,349		10,349
Village Reach	11,141		11,141
Cottonwood Reach	9,293		9,293
Central Reaches	8,447	3,274	11,721
State Parks	7,763	23,813	31,576
Point Whitehorn	13,800		13,800
West Cherry Point	3,696		3,696
Total	64,489	27,087*	91,576
	12.2 miles	5.1 miles	17.3 miles

\* Both sides of Terrell Creek from mouth to the point where the Creek falls below 20 cubic feet per second, year round.

Figure 6-2  
Shoreline Area Designations

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The following is summary information from the County's Shoreline Master Program for each of Birch Bay's shoreline area designations. Additional designation criteria can be found in the specific shoreline environment descriptions in Chapter 23.90 of the County's Shoreline Master Program.

**Table 6-2**  
**Birch Bay Saltwater Shoreline in Feet**  
**Regulated by**  
**Whatcom County Shoreline Master Program**

Neighborhoods	Cherry Point	Natural	Con-serv.	Rural	Urban	Urban Resort	Total
Birch Point			10,349				10,349
Village Reach		158	1,426	9,557			11,141
Cottonwood Reach				4,541		4,752	9,293
Central Reaches					369	8,078	8,447
State Park			6,020		1,743		7,763
Point Whitehorn	2,900		10,900				13,800
West Cherry Point	3,696						3,696
Total	6,596	158	28,695	14,098	2,112	12,830	64,489

**Table 6-3**  
**Birch Bay Freshwater Shoreline in Feet**  
**Regulated by**  
**Whatcom County Shoreline Master Program**

Neighborhoods	Natural	Conserv.	Urban	Urban Resort	Total
Central Reaches			581	2,693	3,274
State Park	10,772	10,982	2,059		23,813
Total	10,772	10,982	2,640	2,693	27,087



## Aquatic Shoreline Area

Defined as the area waterward of the ordinary high water mark of all streams and rivers, all marine water bodies, and all lakes, together with their underlying lands and their water column; including, but not limited to: bays, straits, harbor areas, coves, estuaries, streamways, tidelands, bedlands, wetlands and shorelands. The following is a list of development standards for aquatic shoreline areas:

- Development should be sharply limited to those uses which are compatible with conservation of the area's resources including water, fish and wildlife, and recreation areas, as well as with other appropriate uses and the area's unique natural character. Development in conflict with these objectives should be directed to an on shore location.
- Almost all marine, lake, and river surfaces, water column and bedlands are public property and as such their openness and extent must be protected from unnecessary obstruction or encroachment. Offshore development should be limited to those uses which are truly water-surface dependent, or which provide broad and substantial compensating benefits to the community or region.
- Multiple use of water surfaces and structures in Aquatic Shoreline Areas must be protected and encouraged whenever compatible with resource conservation and other appropriate uses. The need for a specific shoreline development to be multiple-purpose increases as its impact on the shoreline increases.
- As with Conservancy, multiple use and sustained yield are the two overriding policies for management of Aquatic Areas. Development in substantial conflict with these policies should not be permitted due to the public property nature of this area and its natural features.

## Natural Shoreline Area

Defined as an area having high value in a natural setting which has little or no development; including but not limited to: estuaries, marshes, swamps, accretion shoreforms, gorges and other areas publicly managed in their natural condition. The following is a list of development standards for natural shoreline areas:

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- Preservation of the area's natural features and overall character must receive priority over any other potential uses.
- Private and/or public enjoyment of natural areas should be encouraged and facilitated whenever possible without damaging the area.
- Development should be limited to low key recreational facilities which are visually and physically compatible with the area's unique character; such development should be severely restricted in density and design so as to be clearly subordinate to the area's natural character.
- Development which would adversely impact the area's natural features or overall character should be directed to other areas.

### Conservancy Shoreline Area

A shoreline area containing natural resources which can be used or managed on a multiple use basis without extensive alteration of topography or banks: including but not limited to forest, agricultural and mineral lands, outdoor recreation sites, fish and wildlife habitat, watersheds for public supplies, and areas of outstanding scenic quality. Or a shoreline area containing hazardous natural conditions or sensitive natural or cultural features which require more than normal restrictions on development and use of such areas: including but not limited to: eroding shores, geologically unstable areas, steep slopes, floodways and natural accretion shoreforms, and valuable natural wetlands or historic sites. The following is a list of development standards for conservancy shoreline areas:

- Renewable resources should be managed on a sustained yield basis, and vital natural processes should be protected, so that the overall resource base is maintained. Non-renewable resources should only be consumed in a manner compatible with conservation of other resources and other appropriate uses.
- Multiple uses of the shoreline should be strongly encouraged and maintained if such uses are compatible with each other and conservation of shoreline resources. Dominant, intensive single uses over large areas should be discouraged.

## SHORELINES AND SHORELANDS

- Area resources and natural shorelines should be protected whenever necessary from harmful concentrations of people, livestock, building or artificial character structures. Uses which require substantial alterations to the area's natural character, especially its topography and land-water edge, should be directed to Urban or Rural Areas.
- Development of hazardous areas should be designed and/or located so as to reduce potential danger to people and property. Development of moderate to high density or which requires defense works should be directed to less hazardous areas.
- Outstanding recreational or scenic values should be preserved and protected from incompatible development.

### Rural Shoreline Area

Defined as an area developed at a low overall density or used at a low to moderate density; including but not limited to: residences, agriculture and outdoor recreation developments. The following is a list of development standards for rural shoreline areas:

- Soils valuable for agriculture and commercial farms should be protected from irreversible and incompatible uses.
- Intensive, urban character development should be sharply limited and permitted only if substantial open space and/or public access to shorelines is provided.
- Extensive, urban character or high density development should be directed to Urban Areas.
- New development in Rural Areas should protect or enhance the area character by limiting building density and height, providing ample shore setbacks and open space, and promoting visual harmony.
- Public or private outdoor recreation facilities should be encouraged if compatible with agriculture or other appropriate uses.
- New large scale industrial or commercial development should be discouraged except in areas so designated on the County Comprehensive Plan.

## Urban Area

Defined as an area of intensive development including but not limited to urban density residential, commercial and industrial uses. The following is a list of development standards for urban shoreline areas:

- New urban character development should be directed toward already developed or developing areas where compatible.
- Physical and visual access to shorelines for the public should be strongly encouraged and planned for.
- Multiple use of shorelines should be sought and encouraged.
- Additional density should be permitted and encouraged in exchange for additional open space and public access to shorelines.

## Urban Resort Area

Defined as an area with residential and commercial uses, with emphasis in the latter on hotels, motels, shops, restaurants. Commercial rental campgrounds, rental cabins, and shoreline related indoor recreation facilities, all geared to the needs of the tourist and day visitor. The following is a list of development standards for urban resort shoreline areas:

- Scale and design of resort development should assure compatibility with existing and potential nearby development, with uses of adjacent shoreline areas, and with natural shoreline resources.
- Physical and visual access to shorelines for the public should be strongly encouraged and planned for.
- Additional building height over three stories should be permitted if additional open space, view areas, public access and/or other amenities are provided.

## Whatcom County Shoreline Master Program

Whatcom County is required by the Shoreline Management Act, Chapter 90.58 RCW, to manage development within 200 feet of shoreline, inland from the

ordinary high water mark. The primary tool for balancing preservation and protection with development is the Whatcom County Shoreline Master Program. The Program was first adopted in 1976 and has been revised nine times since, with a comprehensive update in 1993. The Shoreline Master Program has been prepared in accordance with Washington Administrative Code 173-26 among others. The WAC 173-16 (Guidelines for the Development of Shoreline Master Programs) were revised late in the year 2000. However, the guidelines have subsequently been appealed and are currently not in effect. If and when upheld, all local governments will be required, within two years, to revise their Shoreline Master Programs. Whatcom County has already taken steps in that direction.

### **Birch Bay Shoreline Enhancement Study**

A review of the saltwater shoreline along Birch Bay was conducted under a Department of Ecology Coastal Zone Management Act grant. A Birch Bay Shoreline Enhancement Citizen Advisory Committee assisted a Technical Committee made up of, among others, Ecology, Washington State Fish and Wildlife, Department of Natural Resources, Whatcom County Planning and Whatcom County Public Works. Inventory data has been assembled utilizing the volunteer efforts of the Citizen Committee. The data analysis and study recommendations were conducted by the Technical Committee, leading to a goal of improving the beach environment through the creation of beach sand and cobble berms and removal of some or all of the existing cement groins. This study was completed in 2003.

## Vision, Goals and Policies

### Vision

The preamble to Birch Bay Community Vision Statement contains the following statement: *"We respect the picturesque setting of Birch Bay and believe that any development along its shores must achieve harmony between this natural and man-made environment."*

### Goals and Policies

Goal SL 1: To protect and enhance Birch Bay's shorelines for the benefit of current and future generations.

Policy SL-1a: Recognize that Birch Bay, from Point Whitehorn to Birch Point, is the only Whatcom County marine shoreline designated by the Washington State Shoreline Management Program as a Shoreline of Statewide Significance and as such requires a heightened sense of stewardship.

Policy SL-1b: Emphasize the existing restrictions on man-made alterations on all near shore lands.

Policy SL-1c: Commercial activity should be discouraged along the shoreline other than that designated for the provision of resort commercial related services.

Policy SL-1d: When considering set backs and height restrictions, allow flexibility in order to protect views, provide open space and public access.

Policy SL-1e: Provide for strategies and funding to delineate in more detail shoreline associated wetlands, stormwater issues, hazardous areas and any other environmentally sensitive issues.

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Goal SL 2: To enhance public access to the Birch Bay shoreline while maintaining a commitment to the rights of private property owners.

Policy SL-2a: Commit to increased awareness of and access to inventories and records that provide information on tideland/nearshore ownerships and covenants.

Policy SL-2b: Do the same for public and quasi public rights-of-way for backshore trail corridors that link to tideland / nearshore public access.

Policy SL-2c: Commit to quantifying and addressing problems experienced by private shoreline property owners due to public access.

Policy SL-2d: Commit to the acquisition or preservation, through other means, of the undeveloped property on the spit at the mouth of Terrell Creek.

Policy SL-2e: Designate important shoreline areas in Birch Bay as “sending areas” for the transfer of development rights under the Whatcom County Transfer of Development Rights (TDR) program.

## Community Shoreline Concerns

Throughout the planning process, the Birch Bay Community Plan Steering Committee has shown a clear understanding of the value of providing a balance between shoreline enhancement and protection. The following is an articulation of their concerns and desires.

### The Berms and Groins

As shown by the citizen effort to revive the Wolf Bauer recommendations, *Shore Resource Analysis – Birch Bay, 1975*, creation of a sand and cobble berm as an alternative to bulkheads, rip rap and gabions where applicable, is of high community priority. The advantages of creating a more natural beach include improved storm defense, enhanced off-street

parking, pedestrian travel, and, when coupled with the removal of groins, a shoreline more pleasing to the eye.

### **Birch Bay Drive**

The community, as clearly shown in the Vision Statement, desires a future that deals effectively with issues such as the quality, type and location of man made structures, the provision of off-street parking, managed public access and undergrounding of utilities.

### **Shoreline Related Environmental Issues**

Past development along the shoreline did not happen with today's awareness and scientific knowledge. The community is more aware and knowledgeable of the need to work diligently to solve current related shoreline problems such as stormwater and drainage issues, and wetland protection/restoration in order to avoid more costly future corrective actions. Areas such as the drainage corridors from the Alderson Road north through the golf course property and the cove at the south east corner of Birch Bay Village will require innovative and diligent approaches to resolve existing problems.

### **Specific Enhancement Items**

Perhaps the highest priority shoreline action item the community has identified, besides the larger issue of the berm, is the acquisition and preservation of the spit at the mouth of Terrell Creek. Other important desired projects include provision of off street public/private open spaces with off-street parking and rest rooms, provision of a boat launch and looking into the feasibility of a public dock or a pier.

## **Shorelines Action Strategies**

### **1. Create a new shoreline area designation – Conservancy Buffer**

The County's current Shoreline Area Designations for Birch Bay include an Aquatic Designation which applies to the area seaward of the ordinary high water mark. In general, the area between the ordinary high



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water mark and the waterside Birch Bay Drive road edge right-of-way is currently the same shoreline designation as that assigned to the adjacent east side of Birch Bay Drive. Consequently, the nearshore on the waterside of the road is susceptible to intrusions that are in conflict with the community goal of acting as a steward for the nearshore. The primary intrusion is inappropriate soil and vegetation removal or alteration and the potential for inappropriate buildings or structures.

It is recommended that Whatcom County create a new Shoreline Area Designation – Conservancy Buffer – which more clearly spells out what can and cannot occur on the nearshore areas. The area that would be included in this new designation would be a narrow strip from the Alderson Road to Seagull Cove at Birch Bay Village. The width would be from the ordinary high water mark to the waterside edge of the road or road right-of-way depending on location. This concept assumes that the nearshore is in need of consistent and continuous environmentally-friendly treatment regardless of adjacent land use and that nearshore development should reflect the community's concepts of physical stewardship, aesthetics and safety. This recommendation is made with the understanding that private property owners have a history of using their nearshore property in certain recreational and residential ways consistent with the Shoreline Master Program. Any changes should be made with due respect for private rights and concerns balanced with natural resource protection and the public interest. The new designation should be formulated in a manner that:

- Allows for the creation of berming where appropriate.
- Allows for (or requires) under grounding of utilities.
- Has a long-term goal of no parking on the west side of Birch Bay Drive. In the short term, eliminates parking except on designated public and commercial spaces.
- Prevents excessive or significant soil and vegetation removal.
- Establishes new sign standards.

**2. Review and revise existing minimum requirements for shore and side-yard setbacks, height and open space requirements in residential and commercial areas.**

Residential. In residential areas, the concern has been primarily with height limits for housing immediately adjacent to both sides of Birch Bay Drive. The concerns expressed deal with two issues relating to view protection and a sense of shoreline aesthetics:

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- That single family housing should be limited to one story, instead of the current heights of 30 to 35 feet depending on the Shoreline Designation and the distance from the ordinary high water mark.
- That multi family housing should not obstruct or significantly limit views of the Bay from existing development.

Commercial: Commercial building concerns have involved both building heights and shoreline setbacks. Current regulations are as follows:

- Maximum building heights range from 15 feet in the Conservancy Designation to 35 feet in the Rural, Urban Resort and Urban Designations with the applicant having the ability to increase the height limits via a shoreline conditional use process.
- Current commercial setbacks vary from 30 feet in the Urban Resort and Urban Designations to 150 feet in the Conservancy Designation. As with residential concerns the issues are view protection and a sense of shoreline aesthetics.

Recommendation. The current minimum building height and setback requirements, with the attending conditional use processes in the County's Shoreline Program, should remain as is unless a rational way can be devised to deal with the issue of reducing the value of the private property involved.

### **3. Create a berm and remove the groins**

Birch Bay, like communities worldwide, has a long history of dealing with the problems created by human development occurring within the near shore of a natural system that is dynamic. Poorly designed or located development creates unnecessary and avoidable threats to property within accretional, transport and erosional shoreline reaches. Today's approaches to building shoreline protection mechanisms generally follow the principle that there are more effective, economical in the long-term, and environmentally-friendly alternatives to traditional construction of concrete bulkheads, heavy riprap armoring, and groins and that these environmentally-friendly alternatives should be applied wherever and whenever possible.

In the early 1980's, Birch Bay experienced what may have been a 100 year event winter storm. It created significant erosion and flooding which provided a stimulus for the community to protect Birch Bay Drive

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and the homes on the east side of the road. A substantial berm was constructed by Whatcom County from the mouth of Terrell Creek to the south end of Jacob's Landing based on recommendations from the 1975 Wolf Bauer study on alternative shoreline protection methods. Figure 6-3 shows a schematic for a typical section of berm and promenade. Figure 6-4 is a rendering showing the shoreline as it might look if the berm project is implemented. The berm has proved to be an effective low cost, long term solution and has had the added benefits of:

- Creating additional beach land providing a safe promenade for pedestrian travel.
- Relieving congestion on the road.
- Providing a more aesthetic shoreline environment.
- Restoring biologically productive beach habitat used by fish and wildlife.
- Providing a physically accessible shoreline (as compared with large, angular riprap boulders.)

There are approximately 45 concrete groins which extend perpendicularly from the shoreline onto the tideflats. The groins are usually two to three feet in width and height and extend out seventy five to ninety feet. They represent efforts to halt beach erosion on specific properties. Interrupting the natural littoral drift of beach building materials has had a short-term benefit to the individual property owner and, often, a long-term negative affect on neighboring properties. Removal of some or all of the groins is important to the Department of Fish and Wildlife to enhance the tideflat natural environment. In addition, berm building generally makes the groins unnecessary.

Recommendation. Assuming that the current study of the shoreline being conducted by the community and federal, state and local agencies is positive, Whatcom County should proceed with the berm construction and groin removal. Every effort should be made to secure funding to engineer and implement for the entire shoreline where berming and/or groin removal is recommended. If phasing is necessary, the highest priority sections of the shoreline should be:

- The continuation of the berm from Jacobs Landing to the public bulkheaded parking area at the intersection of Birch Bay Drive and Cottonwood.
- Replenishment of berm materials from the mouth of Terrell Creek to Jacobs Landing.
- Removal of groins recommended by the study.
- Restoration of flushing capabilities at Seagull Cove (south east corner of Birch Bay Village) if the study can identify corrective techniques. Possible rerouting of the majority of stormwater if determined to be an environmental positive.

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- Restoration of flushing capabilities at Terrell Creek mouth (redesign flapgate at Leisure Park drainage to self-flush “dead spot” and allow fish migration) if a study can identify corrective techniques.
- Re-evaluate design and performance of groin structures “upstream” of Terrell Creek to determine if alterations are required in light of new shore drift data.
- Restoration of feeder bluff characteristics of Point Whitehorn and Birch Point through replacement of adverse shore armoring with more effective, environmentally-friendly reach-wide methods if a study can identify corrective techniques.

Figure 6-3  
Berm and **Promenade**

**Figure 6-4  
Birch Bay Drive**

## Chapter 7

# CRITICAL AREAS

## Introduction

The Washington State Growth Management Act (GMA) requires every county and city in Washington to adopt policies and development regulations that designate and protect critical areas. Critical areas are defined as:

- Wetland areas
- Aquifer recharge areas
- Frequently flooded areas
- Geologically hazardous areas
- Fish and wildlife habitat conservation areas

## Desired Critical Areas Future

### Vision Statement – Critical Areas

The Birch Bay Community Planning Steering Committee has included the following language in their vision statement regarding critical areas:

*“We believe that human activities should be considered as one component of a complex system of relationships among living things and their environment and that we have a responsibility to ourselves and to future generations to seek a mutually supportive balance within this system.”*

### Goals and Policies – Critical Areas

Goal CA 1: To commit to conservation and enhancement of critical areas for long-range benefit to all concerned

Policy CA-1a: Protect and enhance natural systems that support native fish and wildlife populations and habitat.

## CRITICAL AREAS

Policy CA-1b: Ensure the continued existence and enhancement of fish and wildlife populations by protecting and conserving valuable fish and wildlife habitat.

Policy CA-1c: Encourage the preservation of natural river and stream functions and habitat forming marine shoreline processes that support fish and wildlife populations and preserve marine shorelines.

Policy CA-1d: Designate critical areas and buffers in Birch Bay as “sending areas” for the transfer of development rights under the Whatcom County Transfer of Development Rights program.

Policy CA-1e: Adopt an interim ordinance to require the following additional requirements until the County adopts a revised Critical Area Ordinance, projected in December, 2004:

1. on-site mitigation for all wetland disturbance or fill within the Birch Bay Urban Growth Area; and
2. no net loss of area and function of wetlands, including the function of stormwater attenuation/runoff control at a level that existed on each project site in its pre-development condition; and
3. increase building setbacks for residential structures to 150 feet from the shoreline in areas identified as steep slopes on Figure 7-1.

## Wetland Areas

### Existing Conditions

**Wetlands Definitions.** There are two generally accepted definitions of wetlands. One definition is used for regulatory purposes and it is found in the Federal Clean Water Act, Section 404, and the other for scientific purposes and it is defined by the National Academy of Sciences. Both definitions are listed below.



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Definition of Wetlands – Clean Water Act: "Those areas that are inundated or saturated by surface 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 are defined by plants (hydrophytes), soils (hydric soils), and frequency of soil saturation or inundation by water."

Definition of Wetlands – National Academy of Sciences: "A wetland is an ecosystem that depends on constant or recurrent, shallow inundation or saturation at or near the surface of the substrate. The minimum essential characteristics of a wetland are recurrent, sustained inundation or saturation at or near the surface and the presence of physical, chemical and biological features reflective of recurrent, sustained inundation or saturation. Common diagnostic features of wetlands are hydric soils and hydrophytic vegetation. These features will be present except where specific physiochemical, biotic, or anthropogenic factors have removed them or prevented their development."

Application of Definitions to Local Wetland Management: At present, the wetland definitions contained in the state's Growth Management Act and the Shoreline Management Act are virtually the same as the definition used by the federal agencies under Section 404 of the Federal Clean Water Act. The Clean Water Act definition above is generally accepted by federal, state and local agencies involved in wetlands management although a more detailed definition is contained in the state Growth Management Act and Shoreline Master Programs.

**Wetlands Importance.** Whatcom County's current Comprehensive Plan provides a good summary of what wetlands mean to Whatcom County residents. This summary is presented below:

*"Wetlands are crucial environmental features in Whatcom County. Once thought of as waste areas and unproductive lands, it is now known that wetlands provide invaluable functions in aquifer recharge, groundwater storage, flood control containment, pollutant removal and purification of water supplies, as well as provision of fish and wildlife habitat. Loss of wetlands has been due to many factors including urbanization, and, to a large degree, to agricultural development and associated drainage projects."*

### Wetlands Systems and Identification

There are two primary scientific classification systems used by agencies to determine specific types of wetlands. One is the wetland category rating classification and the other is the Cowardin classification. For management purposes, the Department of Ecology and local governments use the wetland category rating system. This system is described in greater detail in Ecology Publication #93-74, entitled: "Washington State Wetland Rating system." The Cowardin Classification System was utilized to quantify wetland types for this plan.

**Wetland Category Rating System.** Many jurisdictions (not Whatcom County) use a wetland "category or rating" system to simplify addressing groups of similar types of wetlands. This is the type of system that is being used when citizens hear wetlands being referred to as a "Category 1, 2, 3 or 4."

A wetlands category or rating system is essentially a process and a document that differentiates wetlands according to specific characteristics or functional attributes. Permit decisions can then be considered in light of the wetland rating and the potential impact. Protective measures are varied, with the highest levels of protection given to the highest rated wetlands (Category 1). This management approach avoids a multitude of case-by-case, subjective impact determinations made by permit administrators. Ecology's rating system uses specific criteria to allow a determination of the resource value of individual wetlands within the four possible categories.

The rating value is based on wetland functions and values, sensitivity to disturbance, rarity, and irreplaceability. The management decisions which can be made according to this system include: the level of impact avoidance to require; the width of buffers necessary to protect wetlands from adjacent land development; mitigation acreage and replacement ratios; and permitted uses in wetlands. This system does not replace a functional assessment of a wetland, which is necessary in order to plan and monitor a wetland.

Although the County currently does not employ a wetlands category or rating system, such a system could be developed for specific areas such as urban type areas or certain drainages basins, such as Birch Bay to provide greater awareness by the property owner and predictability in regulatory implementation.

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**Cowardin Scientific Classification System.** As stated above, the Cowardin system was used to identify and map wetlands for the Birch Bay Plan. Definitions of classifications used:

Estuarine Wetland. Deepwater tidal wetlands and adjacent tidal wetlands that are semi-enclosed by land but have open, partly obscured, or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land.

Palustrine Wetland (POW). Includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5%. The Palustrine System was developed to group the vegetated wetlands traditionally called by such names as marsh, swamp, bog, fen, and prairie, which are found throughout the United States. It also includes the small, shallow, permanent or intermittent water bodies often called ponds (*POW sub-class*). Palustrine wetlands may be situated shoreward of lakes, river channels, or estuaries; on river floodplains; in isolated catchments; or on slopes. They may also occur as islands in lakes or rivers. The erosive forces of wind and water are of minor importance except during severe floods.

The emergent vegetation adjacent to rivers and lakes is often referred to as "the shore zone" or the "zone of emergent vegetation", and is generally considered separately from the river or lake. There are often great similarities between wetlands lying adjacent to lakes or rivers and isolated wetlands of the same class in basins without open water.

Emergent Wetland (PEM). Characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants. All water regimes are included except subtidal and irregularly exposed. In areas with relatively stable climatic conditions, Emergent Wetlands maintain the same appearance year after year. Emergent Wetlands occur in all Systems except the Marine. Emergent Wetlands are known by many names, including marsh, meadow, fen, prairie pothole, and slough. Areas that are dominated by pioneer plants which become established during periods of low water are not Emergent Wetlands and should be classified as Vegetated Unconsolidated Shores or Vegetated Streambeds. The Birch Bay

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wetlands study identified one sub type of estuarine wetland (E2EM) which is a small salt marsh immediately east of Birch Bay Village.

Scrub-Shrub Wetland (PSS). Includes areas dominated by woody vegetation less than 6 m (20 feet) tall (also including forests composed of young trees less than 6 m tall). The species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions. All water regimes except subtidal are included. Scrub-Shrub Wetlands may represent a successional stage leading to Forested Wetland, or they may be relatively stable communities. They occur only in the Estuarine and Palustrine Systems, but are one of the most widespread classes in the United States.

Forested Wetland (PFO). Characterized by woody vegetation that is 6 m tall or taller. All water regimes are included except subtidal. Forested Wetlands are most common in the eastern United States and in those sections of the West where moisture is relatively abundant, particularly along rivers and in the mountains. They occur only in the Palustrine and Estuarine Systems and normally possess an overstory of trees, an understory of young trees or shrubs, and a herbaceous layer.

### Wetlands Identification - Reconnaissance Study

Jim Wiggins (wetland biologist) performed a reconnaissance study of wetlands within the Birch Bay planning area using National Wetland Inventory data (maps), aerial photos flown in 2001 for this planning process and past survey / delineation experience in the area. The aerial photos were marked and wetlands were identified by type: palustrine emergent (PEM and E2EM), palustrine shrub/scrub (PSS), palustrine forested (PFO), and palustrine open water (POW). The reconnaissance study, while appropriate for a comprehensive planning effort in that it generally identifies wetland areas, is a preliminary evaluation and cannot take the place of the more detailed wetland delineations needed for specific project evaluations.

A scaled acreage grid was overlaid on the aerial photos to determine approximate wetland acreage figures, by scientific type, within the areas described by the Wiggins study. Numbers of acres given are "preliminary estimates" and not a precise count of actual wetland acreage. Extensive fieldwork, including delineations, would be required to provide the latter. In addition, labeling an area as a "wetland" through a study such as this does not necessarily mean that the area in question cannot be developed. It simply

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means that due consideration must be given to regulatory requirements when planning future land uses. Conversely, areas that have not been identified as wetlands by this preliminary study may, in fact, be wetlands upon closer scrutiny. Again, considerable fieldwork, possibly including a delineation, would be required to provide a definitive determination as to whether a specific property has a wetland and what type it may be. Table 7-1 gives the preliminary estimated wetland acreage by type. Figure 7-1 maps the planning area wetlands from the Wiggins reconnaissance study. For more detailed mapping of wetlands, see the aerial photos with mylar overlays. The photos are on file at the Department of Ecology Offices in Bellingham. A more detailed wetland map also appears in the Birch Bay Baseline Data Report. A Baseline Data Report was prepared specifically for each of the ten neighborhoods in the Birch Bay area.

**Table 7-1**  
**Preliminary Wetland Acreage Estimates By Cowardin Classification**  
**Acres**

Neighborhood	PEM	PSS	PFO	POW	E2EM	Total Acres
Birch Point	15	16	34	2	0	67
Birch Bay Village	0	0	0	34	2	36
Cottonwood	63	18	42	0	0	123
Hillsdale	58	64	51	2	0	175
Central Uplands	207	108	113	2	0	430
Central Reaches	29	3	12	0	0	44
State Park	0	23	19	0	0	42
Terrell Creek	242	15	10	16	0	283
Point Whitehorn	38	0	14	0	0	52
West Cherry Pt.	n/a	n/a	n/a	n/a	n/a	n/a
Totals	652	247	295	56	2	1,252

## Management of Wetlands

**Wetlands Assessment.** The County's Critical Areas Ordinance requires an assessment by County staff or consultants prior to any modification of wetlands and associated buffers or for the purposes of mitigation. The management of wetlands involves, first of all, determining their overall size, shape, functional attributes and value to the community.

Figure 7-1  
Wetlands, Steep Slopes, Pacific Herring Habitat  
and Significant Bird Habitat

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**Size and Shape.** A delineation (precise defining/mapping) of the upland/wetland border is needed in order to come up with a management plan and mitigating measures for proposed projects. This enables the calculation of wetland acres or square footage relating to regulatory thresholds and other applicable standards.

**Attributes and Values.** Functional assessment required by the County addresses the following attributes:

- Erosion control and shoreline stabilization
- Fish habitat
- Groundwater recharge and base flow maintenance
- Stormwater attenuation including flood storage
- Water quality improvement
- Wildlife habitat

Best science in the determination of functional attributes is constantly evolving as new data and methods become available. Ecology has recently published Methods for Assessing Wetland Functions in Riverine and Depressional Wetlands Located in the Lowlands of Western Washington, Volume 1, which significantly improves the state of the science.

Once the physical functions of wetlands have been assessed, the information must be integrated into the societal values placed on identified functional attributes and the wetland's location relative to human activities e.g. urban areas, parks, schools, etc. and natural features within a watershed e.g. upland wildlife areas, waterbodies, etc. For example, a wetland may be of small size, isolated and have moderate wildlife functions, but due to its close proximity to an urban elementary school and lack of other wetlands in the city, the wetland could be given a high value for educational and scientific purposes. These societal values are expressed at the beginning of this chapter with the listing of critical areas purposes.

## Managing Agencies, Regulations and Permits

Three agencies, one federal (Army Corps of Engineers) and two state (The Department of Ecology, and the Office of Community Development) have the primary responsibilities in providing wetland policies, guidelines and regulations from which local governments can develop their own regulations and make decisions. The Corps and Ecology also have

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independent enforcement authority to require compliance with the federal and state laws that apply to wetlands, such as the Federal Clean Water Act, the State Water Pollution Control Act, and the Shoreline Management Act. At the local level, Whatcom County's regulation of wetlands is managed with two basic planning tools; the Critical Areas Ordinance and the Whatcom County Shoreline Master Program and the various regulations related to these documents e.g. clearing and grading ordinance, manure management ordinance, etc. Once wetlands have been defined, identified and mapped, the next step is applying the standards and regulations needed. Wetlands in unincorporated Whatcom County are regulated under the County's Critical Areas Ordinance and/or Shoreline Master Program.

**Critical Areas Ordinance Regulation.** The primary regulatory tool for wetland management in Whatcom County is the Critical Areas Ordinance. All wetlands are regulated with the following exceptions:

- Areas in which wetlands were created by activity; intentional or unintentional, other than by mitigation, subsequent to July 1, 1990.
- Isolated wetlands less than 1/3 acre in size.
- Any wetland hydrologically isolated, with vegetation dominated by invasive species or pasture grasses, and the dominant functions of which are restricted to stormwater storage/flood attenuation, and the functions of which are no greater than all alternative nonwetland sites on the parcel of property in question.

**County Shoreline Management Program.** The Shoreline Management Program contains many policies and regulations that apply to wetlands. Although the Shoreline Management Program applies to a smaller portion of the county i.e. the larger lakes, rivers and streams, and all marine shores, it regulates all wetlands within its jurisdiction regardless of size. Whenever a conflict in wetland regulation between the County's Critical Areas Ordinance and Shoreline Master Program arises, the more restrictive provision applies. Coastal wetlands in and adjacent to Birch Bay and wetlands along Terrell Creek are subject to the Shoreline Master Program provisions in addition to the Critical Areas Ordinance.

## Related Laws and Permits

### **Federal Laws/Permits**



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Federal Clean Water Act Section 404. Permit required for placement of dredge or fill materials including any related draining, flooding, and excavation. (Army Corps of Engineers)

Federal Clean Water Act Section 401. Requires state (Ecology) certification that the proposed project will meet state water quality standards.

Federal River and Harbor Act Section 10. Required for all construction activity related to rivers and harbors. (Army Corps of Engineers)

Federal Coastal Zone Management Act. Notice of consistency with state laws (Ecology) required for projects involving federal permits.

National Environmental Protection Act (NEPA). Full disclosure of potential impacts associated with proposed actions. (Usually agency issuing permit)

### **Primary State Laws and Permits**

State Growth Management Act. Consistency with local comprehensive plans and development regulations. Various related permits. (Local jurisdictions and Washington Office of Community Trade and Economic Development)

State Shoreline Management Act. All permits required to ensure compliance with local shoreline programs and the State SMA and implementing rules. (Local jurisdiction and Ecology)

State Water Pollution Control Act. Full compliance with water quality standards including protection of wetlands as surface waters of the state. (Ecology)

State Hydraulic Code. Permit required for all projects within wetted perimeter streams and associated wetlands. (Washington Fish & Wildlife)

State Forest Practices Act. Required for tree harvesting - Forest Practices Application addresses wetland protection and required buffers. (Washington Department of Natural Resources)

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State Environmental Policy Act. Full disclosure of potential environmental impacts associated with proposed actions. (Usually required by agency issuing permit)

### **Local Laws/Permits**

Consistency with county comprehensive plans, Shoreline Master Program, Critical Area Ordinance, zoning and construction ordinances. A variety of related permits are required for any proposed project, most of which specifically address wetland issues.

## **Development in Wetland Areas**

Most regulations allow limited development in wetland areas. Generally, development is not permitted in Category 1 wetlands areas. For development to take place in wetland areas, the developer is required to create a wetland that is 1.5 to two to three times the size of wetland that is filled in or built upon. Not only is the developer required to meet the size requirement but the developer is also required to create a wetland that has the same or higher function and value. Filling of wetlands or building upon wetlands requires the developer or builder to obtain a permit from the US Army Corps of Engineers.

To create a wetland is a costly and time consuming process. Development in wetlands occurs only in high land value areas where the cost of creating a new wetland is less than acquiring additional land for development purposes. Creating wetlands for the purpose of constructing single family residences on individual lots, seldom occurs. A developer or a builder that contemplates building on wetlands is faced with four economic considerations: 1) the cost of creating a wetland (1.5 to 3 times the size) versus the cost of acquiring additional land to get around the existing wetland; 2) the cost of hiring a wetland biologist and a landscape architect to design a replacement wetland; 3) the uncertainty of waiting a long time (sometimes two to three years) for a response from the Corps of Engineers which may turn out to be negative; and 4) development in wetlands usually runs into local opposition by environmental interest groups which, in turn, results in lengthy process and appeals through the courts (time consideration).

### Wetland Delineation

When a project involving wetlands is proposed the first step is for the applicant is to provide a delineation study in accordance with the State and Army Corps of Engineers wetlands delineation manuals. The primary function of the delineation study is to establish the boundaries and subsequent buffers needed to keep the wetland(s) intact and functioning.

The state legislature passed a law in 1995 directing Ecology to adopt a state wetland delineation manual that is consistent with the federal delineation manual (1987 Corps of Engineers manual). Ecology has adopted a Washington State Wetland Identification and Delineation Manual March 1997 Ecology Publication No. 96-94 under the Shoreline Management Act regulations (WAC 173-22). The manual is a required reference for any delineation conducted under the Shoreline Management Act. Also, local governments must use it in implementing Growth Management Act regulations. Since this manual is consistent with the 1987 Corps Manual anyone needing approval from both federal and state/local agencies should simply designate that their delineation was conducted using both the state manual and the 1987 Corps manual.

### Wetland Buffers

Buffer areas are established to protect wetland functions. The state and federal agencies require their own buffers based on their applicable regulations. Buffers required by the Critical Areas Ordinance may be increased or decreased by the County depending on site-specific characteristics and circumstances. All wetlands regulated by the county Critical Areas Ordinance are protected by a standard 100 foot buffer with the following exceptions:

- Isolated wetland areas not characterized as mature forested, fens, sphagnum, bogs, or estuarine wetlands shall be protected by a standard 50 foot buffer and,
- Isolated wet meadows are exempt from standard buffer requirements when it is determined that the wetland functions are restricted primarily to stormwater storage or attenuation.

Almost all wetland regulations require that wetlands be buffered from development. Buffer areas range from as little as 25 feet to 200 feet or more, depending on the function and value of the wetland. Most regulations

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allow limited development in the buffer areas, such as walkways, yard furniture, observation platforms, and landscaping. Some regulations allow buffer averaging, meaning that a buffer area can be reduced in one place, if it is expanded in another place. Usually, wetland buffer areas can be used to calculate minimum lot size and can be used to meet building setback requirements.

### Wetland Mitigation

The County's Critical Areas Ordinance normally requires mitigation of impacts to identified wetlands and their buffers. Mitigation plans must be prepared utilizing applicable portions of Ecology's Guidelines for Developing Freshwater Wetland Mitigation Plans and Proposals, March 1984. The County then makes a determination of the extent and type of mitigation required. Mitigation is based on first avoiding the impact and secondly, minimizing impacts. Mitigation can include off-site mitigation, including wetland banking, if appropriate.

### Wetland Action Strategies

**Proposed Changes.** Whatcom County will be doing a comprehensive review of its Critical Areas Ordinance in 2004. Changes will undoubtedly result in light of such things as the current emphasis on salmon protection and enhancement. When the new Critical Areas Ordinance is adopted, all sections of this chapter; shorelines, wetlands, steep slopes, and fish & wildlife habitat should be amended as needed. A moratorium on wetland development or fill is recommended until the revised County Critical Area Ordinance is adopted.

**Wetland Banking.** The basic concept of wetland banking is to create or restore a large wetland area and use the "credit" to compensate for wetland impacts that occur elsewhere. Often, it is in the public and environmental best interest to use this approach. The concept is relatively new and guidelines are evolving at the federal and state level. This approach has the potential to elevate Birch Bay's effectiveness in providing innovative critical area stewardship and should be pursued whenever possible. Wetland banking is specifically allowed in the current Critical Areas Ordinance subject to criteria cited at Ch.16.16.245.B.

**Incentives for Wetland and Riparian Protection.**  
Incentives such as Open Space property tax assessment (reduced taxes),

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Conservation Easements, Density Credits, and acquisition through the County's Conservation Futures Fund are currently available and described in the Critical Areas Ordinance at Chapter 16.16.295. These incentives, singularly or in combination, could be used more effectively to preserve the priority critical areas that the community identifies.

### Best Available Science

In 1995 the Washington State Legislature added a new section to the Growth Management Act that raised the standards for designating and protecting critical areas and the protection of anadromous fisheries. RCW 36.70A.172 was added to clarify the State's goals and policies for protecting critical areas' function and values. While the Growth Management Act does not set specific state or regional development standards for critical areas protection, the statute is clear that local government must include the "best available science" when designating and protecting them.

The best available science or valid science can be described as research conducted by qualified individuals using documented methodologies that lead to verifiable results and conclusions. The work done on identifying wetlands in the Birch Bay area meets the "best available science" criteria as demonstrated below:

- Use of most recent color aerial photography at an approximate scale of 1 inch equals 200 feet.
- Identification was conducted by James Wiggins, a certified wetland biologist with over ten years of experience.
- The classification system used was the Cowardin system.
- On site inspections were conducted where aerial photo coverage did not produce definitive results.

## Aquifer Recharge Areas

### Existing Conditions

Aquifer Recharge Areas are those areas of high susceptibility to aquifer contamination as listed below. Figure 7-2 shows the Aquifer Recharge Areas in the Birch Bay planning area.

1. The project is located on either soil conservation service hydrologic soil group (HSG) A or B; or

## **CRITICAL AREAS**

2. The project is located on either the Sumas Outwash geologic unit or the Nooksack River floodplain alluvium geologic unit; or
3. More than 50 percent of the documented well logs within a half-mile radius of the project indicate a static water level of less than 50 feet below the ground surface as indicated by well logs; and
4. The project is located on a subsurface above the first occurrence of water which consists of highly permeable materials that are unobstructed by poorly permeable strata.

### **Desired Future**

#### **Critical Areas Ordinance Goals**

1. To preserve, protect, and conserve Whatcom County's groundwater resources for current and future generations by protecting critical aquifer recharge areas from contamination.
2. To prioritize the management, protection and conservation of groundwater recharge areas providing groundwater which is currently used or has the potential to be a source of potable water.

#### **Project Review Process:**

1. Projects in critical aquifer areas for which Whatcom County is the lead agency under State Environmental Policy Act (SEPA) shall be evaluated for their potential adverse impacts on ground water quality and quantity.
2. A SEPA checklist shall be used as part of a critical areas supplement to assist the county in taking final action. Those activities, projects and thresholds, exempt from SEPA regulations will not be reviewed for compliance with the critical areas ordinance.
3. The SEPA official shall review the SEPA checklist and make a SEPA threshold determination. The SEPA official shall use Appendix B of the critical areas ordinance, Sources of Ground Water Contamination, and other available sources of information when reviewing a project for potential ground water contamination in critical recharge areas. The county shall condition or deny any

project to minimize the potential contamination from such sources. Conditions or denial of any project shall be based upon information and analysis contained in an environmental impact statement, a mitigated declaration of nonsignificance, or any other relevant environmental analysis.

### Frequently Flooded Areas

Frequently flooded areas are flood areas caused by rivers or creeks overflowing their banks and flooding the adjacent land area. In a marine environment, floods occur and are caused by a combination of high tides and severe wind conditions. Frequently flooded areas have been mapped by Federal Emergency Management Agency (FEMA). These maps delineate the 100 year flood area. FEMA flood area maps are used to by local governments to regulate development to assure that the lowest habitable floor in a residential structure is above the 100 year flood level. The private sector uses FEMA flood area maps to sell flood insurance.

As shown in Figure 7-3, the 100 year flood plain includes a portion of Birch Bay Village. Further, the 100 year flood area includes Birch Bay beach area up to Birch Bay Drive. The Birch Bay Drive flood area extends form Birch Bay Village to Birch Bay State Park. FEMA maps also show that Terrell Creek is subject flooding (100 year) all the way east to Jackson Road.

### Geologically Hazardous Areas

Thirty percent slopes (30 feet height in 100 foot horizontal distance) are generally considered geologically hazardous. These areas, due to steep slopes, are naturally prone to landslides or erosion. In addition, upland stormwater runoff can accelerate the landsliding factor.

### Existing Conditions

Birch Point and Point Whitehorn have been declared eroding land areas by ocean geologists such as Wolf Bauer. Figure 7-1 shows the location of steep slope areas in the Birch Bay planning area.

Figure 7-2  
Aquifer Recharge Areas



Figure 7-3  
Frequently Flooded Areas

### Action Strategies

Any building in the steep slope area should take into consideration the potential of slides or erosion caused by development. Stormwater management in these areas is of high priority. The County's Critical Areas Ordinance now requires that "projects in landslide areas must cause no increase in surface water discharge or sedimentation to other properties and shall not decrease slope stability on or off-site". In addition, the Critical Areas Ordinance encourages development clustering to reduce disturbances.

Whatcom County is in the process of updating the County Critical Areas Ordinance, which may result in increased protection of geologically hazardous areas. As an interim measure, the Birch Bay Community Plan recommends increasing building setbacks from steep slopes identified on Figure 7-1 to 150 feet until the revised Critical Area Ordinance is adopted (scheduled for December, 2004.)

## Fish and Wildlife Habitat Conservation Areas

### Existing Conditions

Birch Bay has an abundance of significant fish, shellfish, marine birds, raptors and other wildlife which, taken together, create a primary reason people enjoy living in the area. The marine shoreline tideflats and the Terrell Creek watershed provide especially high quality habitat.

**Saltwater Fish Habitat.** Birch Bay provides excellent rearing habitat for many juvenile fish, including the Pacific herring. The Washington State Coastal Zone Atlas identifies the waters off the Birch Point, Birch Bay Village Reach, Point Whitehorn and West Cherry Point neighborhoods as habitat for Pacific herring. Figure 7-1 shows the Pacific herring habitat area.

**Waterfowl and Raptor Habitat.** Birch Bay provides excellent habitat for variety of species of waterfowl and raptors. Sections of the Cottonwood, Hillsdale, Central Reaches, Central Uplands, State Park and Terrell Creek neighborhoods have been identified as medium to high density waterfowl areas. In addition, the area is prime habitat for two species of note: the Northern Bald Eagle and Great Blue Heron. Documented Northern Bald Eagle nesting sites exist in the Birch Point and Cottonwood neighborhoods. A significant Great Blue Heron Rookery exists in the State Park neighborhood. Important bird habitats are shown on Figure 7-1.

### Action Strategies

Besides the obvious values gained from acting as stewards for other living things, the fish and wildlife of Birch Bay and Terrell Creek are an important part of the community's tourism commerce. Land use decisions should integrate careful consideration of fish and wildlife populations and habitat. The County's current Critical Areas Ordinance provides this integration. Therefore there are no recommendations regarding ordinances and permits as they relate to fish and wildlife.

There are, however, strategies the community should develop to enhance awareness of and commitment to fish and wildlife habitat resources. Most of these are included in the Parks and Recreation element e.g. interpretive signage. In addition, the community should work closely with major and minor developers to encourage private voluntary efforts such as BP – Cherry Point's commitment to habitat preservation in the State Parks and Terrell Creek neighborhoods.

## Chapter 8

# LAND USE

## Existing Plan

### Whatcom County Comprehensive Plan

The Whatcom County Comprehensive Plan, dated May 1997, on page 2-47, identifies Birch Bay as an unincorporated urban growth area. The Plan states that Birch Bay is a resort community which has the most development and the most potential for development of any unincorporated area in the County. The Plan goes on to say that the urban growth area can accommodate about 5,300 new residents over the twenty year planning period (1995-2015). The Plan identifies a shortage of potable water and the presence of extensive wetlands as limiting factors to accommodating residential growth.

### Urban Growth Areas

The Birch Bay urban growth area is sandwiched between Blaine urban growth area to the north and the Cherry Point industrial area urban growth area to the south. The Birch Bay urban growth area is further divided into short-term and long-term urban growth areas.

**Birch Bay Short-Term Urban Growth Area.** A short-term urban growth area is an area where urban growth is at or is approaching urban densities. A short-term urban growth area is also an area that is being served by utility services, such as water and sewer, or where water and sewer services can be easily extended. The short-term urban growth area for Birch Bay is shown in Figure 3-2. There are 2,591 acres of land in the short-term urban growth area.

**Birch Bay Long-Term Urban Growth Area.** A long-term urban growth area is an area where growth is likely to occur within the twenty year planning horizon. How urban services, such as water and sewer, are to be provided is not precisely defined for long-term urban growth areas. Long-term urban growth areas can be characterized as areas where urban growth is likely to occur after development in the short-term urban growth area is reaching build-out conditions. The long-term urban growth area for Birch Bay is shown in Figure 3-2. The total land area inside the long-term urban growth area minus the short term urban growth area amounts to 1,294 acres.

Density in the long term urban growth area is currently held to one housing unit per five acres until the area becomes part of the short-term urban growth area.

**Blaine Urban Growth Area.** The Blaine urban growth area is the area north of Lincoln Road. The southern boundary of the Blaine urban growth area is shown in Figure 3-2.

**Cherry Point Urban Growth Area.** The Cherry Point urban growth area is an unincorporated urban growth area dedicated to industrial development. Land in the Cherry Point urban growth area is zoned both light impact industrial and heavy impact industrial uses. The western and northern boundaries of the Cherry Point urban growth area are defined as running along Koehn Road (west) and Grandview Road and Terrell Creek (north). The boundaries for the Cherry Point urban growth area are shown in Figure 3-2.

### Birch Bay Subarea Plan

Planning is not new to the Birch Bay area. The first known land use plan and a zoning map were prepared and adopted in the 1970's. Then in 1987, an update was prepared that more-or-less reaffirmed the 1970's land use patterns and zoning designations. Today's Comprehensive Plan (1997) further reaffirms the earlier land use patterns. The current zoning of the Birch Bay area is shown in Figure 8-1.

### Zoning

**UR-4.** UR-4 means an urban residential zoning district with a maximum density of 4 dwelling units per one acre. The minimum lot size is 8,000 square feet with 6,000 square foot minimum lot size allowed in cluster developments. In Birch Bay, UR-4 zoning shows up both inside the short-term urban growth area and in the long-term growth area. A limited amount of commercial development is allowed in the UR-4 zoning district. Density in the long-term urban growth area is held to one housing unit per five acres until the area becomes a short-term urban growth area.

Figure 8-1  
Current Zoning

**URM-6.** URM-6 means an urban residential medium density zoning district with a maximum density of 6 dwelling units per one acre. The minimum lot size is 7,200 square feet. In Birch Bay, URM-6 zoning shows up both inside the short-term urban growth area and in the long-term growth area. In the short term planning area only, single-family dwellings, duplexes, and multifamily dwellings consistent with the density requirements of the district are allowed, provided that the total number of dwelling units per lot is greater than four. Outside the short-term planning area and inside the long-term planning area, only single family residential dwellings are allowed.

**NC.** NC means a neighborhood commercial zoning district. The purpose of the neighborhood commercial district is to provide for small, concentrated land areas intended for retail sales of convenience goods and services to persons residing within a neighborhood trade or service area. Maximum allowable floor area shall not exceed 6,000 square feet per individual use allowed in the district. Maximum building height shall not exceed 25 feet.

**RC.** RC means a resort commercial zoning district accommodating single family dwelling units, multi-family dwelling units , mobile home and recreational vehicle parks, hotels, motels and time-share condominiums. Retail development is limited to 2,500 square feet per shop. Maximum density in a public sewer and water service area is 7 dwelling units per one acre for single family residential and duplex type of development and 22 dwelling units per one acre for multi-family development. Minimum lot size in a public water and sewer service area is 6,000 square feet. The height limit in the RC zone ranges from 35 feet to 50 feet depending on the distance landward from the shoreline. The above height limit can be exceeded to a maximum of 75 feet under the conditional use permit procedure.

**GC.** GC means a general commercial zoning district allowing the development of most commercial establishments, namely retail, service, office and hotel/motel uses. Single family and multi-family development is also allowed in a general commercial district. Lot coverage is limited to 30 percent of the lot area and height is limited to 35 feet.

**R-5A.** R-5A means a rural development zoning district with a minimum lot size of five acres per dwelling unit. Limited commercial activities are allowed in the R-5A zoning district.

**R-10A.** R-10A means a rural development zoning district with a minimum lot size of 10 acres per dwelling unit. Limited commercial activities are allowed in the R-10A zoning district.

**LII.** LII means a light impact industrial zoning district. Light impact industrial uses are primarily related to services, and distribution, manufacture and assembly of finished products that have a relatively light impact on adjacent and adjoining districts.

**HII.** HII means a heavy impact industrial zoning district. Heavy impact industrial uses are primarily related to producing, distributing and changing the form of raw materials; whereby product demand and industrial employment serve nonlocal markets. In addition, the purpose of this district is to encourage the siting of industrial uses which will optimize the land available for heavy impact industrial.

**Summary of Existing Zoning.** The amount of land dedicated to each zoning district listed above is shown in Table 8-1. By far, the predominant amount of land is in the UR-4 classification.

### **Problems with the Existing Plan**

The most significant problem with the existing plan is that it is out of date. Ideas formulated in the 1970's have been carried over to the 1980's and now to the current Whatcom County Comprehensive Plan, dated May 1997. No significant independent assessment of planning issues, involving the residents of Birch Bay, has been done since the 1970's.

The second most significant problem with the existing plan is that it has not been designed or dimensioned to accommodate the 20 year forecasted population, employment and housing. The May 1997 Whatcom County Comprehensive Plan does not show a sub-area or community population and land consumption demand forecast for the Birch Bay area. Current urban planning practice standards require that an urban area plan must be sized to accommodate the forecasted growth. The ability of the urban area plan to absorb the forecasted growth must be demonstrated in numeric values.



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**Table 8-1**  
**Amount of Land Dedicated to Zoning Classifications**  
**In Acres**

<b>Zoning District</b>	<b>Inside Short Term UGA</b>	<b>Inside Long Term UGA</b>	<b>Inside Planning Area</b>	<b>Total</b>
UR-4	1,106	1,079		2,185
URM-6	1,055	207		1,262
NC	10	8		18
RC	317			317
GC	103			103
R-5A			1,961	1,961
R-10A			786	786
LII			482	482
HII			1,229	1,229
<b>Total</b>	<b>2,591</b>	<b>1,294</b>	<b>4,458</b>	<b>8,343</b>

Inside Short Term UGA means all land inside short term urban growth area

Inside Long Term UGA means all land inside the long term urban growth area minus all land inside short term urban growth area

Inside Planning Area means all land inside Birch Bay Community Planning area minus all land in short and long term urban growth area

## Existing Development

### Planning Area

One of the objectives of the current planning program is to determine if the existing urban growth area (both short and long term) can accommodate the forecasted growth. If the forecasted growth consumes more land than is available for development in the existing urban growth area then the plan should propose an expansion of the urban growth boundary. To deal, in a meaningful manner, with the expansion of the urban growth boundary, the planning area should be large enough to allow the consideration of various options. Therefore, the planning area for the Birch Bay community planning program is significantly larger than the long-range urban growth area and is shown in Figure 3-1. The planning area is further broken down in the to ten neighborhoods. The boundaries of neighborhoods are shown in Figure 3-3 and the concept of neighborhoods is discussed in some detail in Chapter 3. The land area in the

planning area amounts to 8,343 acres. The amount of land in each of the neighborhoods and its year 2000 population is shown in Table 3-1.

### **Birch Bay US Census Designated Place**

The U.S. Census in 1990 and again in 2000 reported census data for an area called Birch Bay Census Designated Place. The boundaries of the Birch Bay Census Designated Place are shown in Figure 3-1.

### **Existing Development Patterns**

Development at Birch Bay has primarily occurred along major roads and highways. The most intense development occurs along Birch Bay Drive. Any further development along the central part of Birch Bay Drive will take the form of condominiums and time-share hotels and motels. Any significant development along Birch Bay Drive will come in the form of redevelopment, meaning that existing low value structures will be demolished and new high value structures will take their place.

There are a number of major landholdings in the Birch Bay planning area. The major land owners (over 500 acres) in the Birch Bay planning area and adjacent areas are: The Trillium Corporation and British Petroleum / Cherry Point. Major landholdings of both the Trillium Corporation and British Petroleum / Cherry Point are shown in Figure 8-2.

The Birch Bay planning area contains a large amount of wetlands. Wetlands come in different classifications and are discussed in some detail in Chapter 7. There is considerable amount of debate on what classifications of wetlands can be developed and what classifications must remain free of development. This plan makes the assumption that all wetlands are to remain out of development.

## **Forecast of Development**

### **Population Forecast**

U.S. Census reports census information for an area called Birch Bay Census Designated Place. The Birch Bay Census Designated Place is slightly larger than the Birch Bay planning area. The boundaries of the Birch Bay Census Designated Place are shown on Figure 3-1. The U.S. Census Bureau began to report census data for the Birch Bay Census Designated Place, beginning in 1990. In 1990 the population of Birch Bay Census Designated Place was 2,656 persons. In 2000, the number of persons had grown to 4,961. The ten year growth in population was 86.8 percent or about 6.4 percent per year.

The U.S. Census statistics show that Birch Bay was the fastest growing urban area in Whatcom County. Whatcom County's year 2000 population was 166,814. The Birch Bay Census Designated Place proportion of Whatcom County's population in year 2000 was 2.97 percent. In 1990, the Birch Bay Census Designated Place share of the County's population was 2.08 percent. The initial forecasts by Kask Consulting project that by 2020, the proportion of population in the Birch Bay Census Designated Place will be 4.76 percent of the County's population. It should be noted that the twenty year growth rate (2000 to 2020) for the Birch Bay Census Designated Place is far less aggressive than the growth rate from 1990 to 2000.

Kask Consulting, Inc.'s initial 2020 population forecast for Whatcom County amounted to 225,228 persons. This forecast compares favorably with that of the Washington State Office of Financial Management (OFM) forecasts. In 1995, OFM forecasted the 2020 population of Whatcom County to be 224,391 persons. In January 2002, OFM published a revised forecast for population in Whatcom County to be 230,228 persons in year 2020. Applying Kask's estimated 4.76 percent share of 225,228 County's population yields a year 2020 Birch Bay Census Designated Place population of 10,721 persons. A twenty year high, middle and low forecast of Birch Bay Census Designated Place population is shown in Table 8-2.

The Birch Bay Community Planning Steering Committee reviewed the consultant's forecasts methodology and assumptions and after considerable debate and evaluation, originally selected 11,500 persons to be the year 2020 population forecast for Birch Bay planning area.

Figure 8-2  
Major Land Holdings

**Table 8-2  
Population Forecasts 2000 to 2020 - Birch Bay Census Designated Place**

<b>Year</b>	<b>High</b>	<b>Middle</b>	<b>Low</b>
1990	2,656	2,656	2,656
2000	4,961	4,961	4,961
2005	6,323	6,086	5,867
2010	7,926	7,484	7,088
2015	9,740	9,019	8,388
2020	11,804	10,721	9,788

However, the Steering Committee removed the West Cherry Point area, which is currently zoned industrial, from consideration as a residential area at the present time. This area was projected to have 1,421 housing units. The County has also obtained updated population projections for the County and UGAs from ECONorthwest. Therefore, the population projection has been reduced to 9,619 people in 2022, consistent with the ECONorthwest high projection for Birch Bay. This maintains a balance between population and housing.

Population of the Birch Bay Community is forecasted to grow to 9,619 persons in 2022, while its housing unit count is forecast to grow to 4,128 full time housing units. In addition to the full-time housing units, a need for 4,128 housing units, time-share condos or RV spaces is projected to accommodate seasonal residents. The single family to multi-family housing unit mix is forecast to grow from 87/13 in 2000 to 80/20 in 2022, resulting in 3,302 full-time single family housing units, 826 full-time multi-family housing units, and 4,128 seasonal recreational units or RV spaces. In terms of growth, the Birch Bay Community needs to accommodate an additional 1,383 year-round single family housing units, an additional 345 year-round multi-family housing units, and approximately 1,728 additional seasonal or recreational units or RV spaces. Projected population and housing unit growth from 1990 to 2022 is shown in Figure 8-3. The housing unit estimates in this Figure include full-time and seasonal housing units.

## **Employment Forecast**

The employment forecast is not an extension of current employment data or current trends. The employment forecast represents the type and number of employees reasonably expected to be employed in an urban area or municipality with a 12,000 to 15,000 population. The population base for employment purposes is larger than the one projected in the 20 year population forecasts. The employment population base encompasses the commercial trade area. For example, persons residing in the Semiahmoo neighborhood, north of Birch Bay Village, are included in the employment population base. Institutionally, these people are citizens of the City of Blaine but are also commercial

customers of Birch Bay retail and professional services. Table 8-3 presents an employment forecast for the Birch Bay commercial trade area in the year 2020.

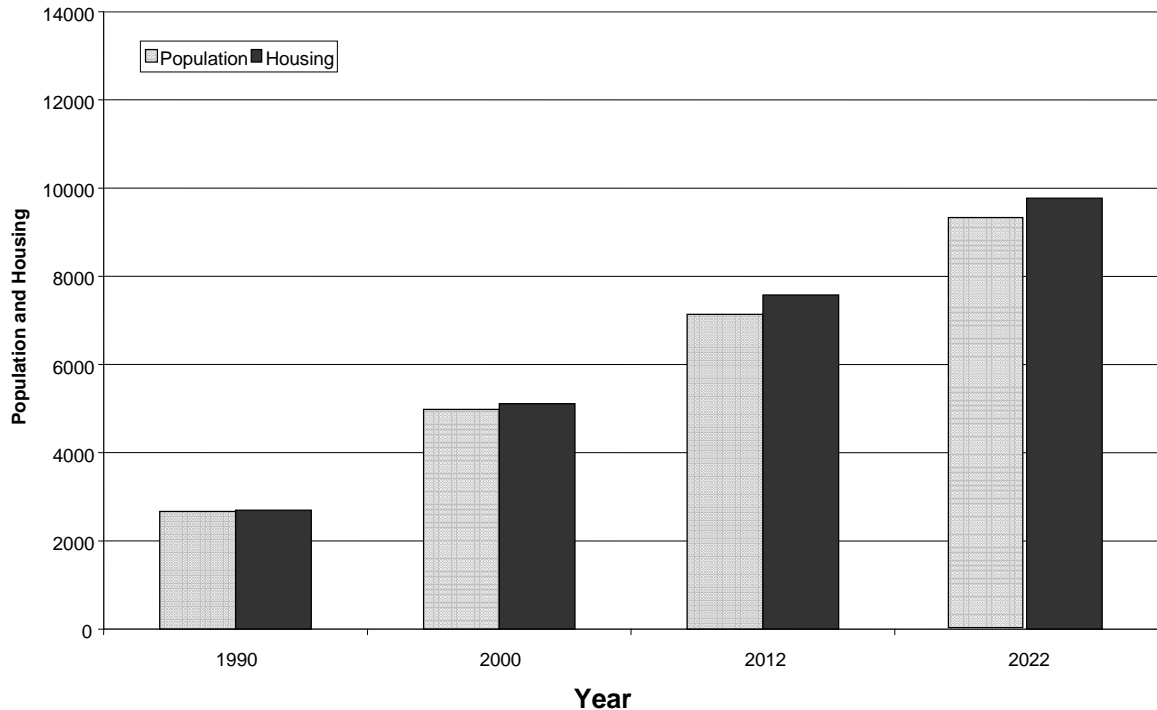
**Table 8-3**  
**Employment Forecast, Year 2020**  
**Birch Bay Commercial Service Area**

Category	Employment
Retail	831
Services	1,073
Manufacturing	263
W/T/C/U*	164
Government	371
Schools	28
Construction	30
F/M/I**	35
Agriculture	15
Other	120
Total	2,930

• Wholesale trade, transportation, construction, utilities

\*\* Finance, management, insurance

**Figure 8-3  
Population and Housing**



## Housing Units Forecast

The year 2000 U.S. Census population count for Birch Bay Designated Census Place is 4,961 persons. The housing unit count is shown as 5,105 housing units. This means that there are more housing units than persons. It should be noted that Birch Bay is a resort / recreational / residential community. Many housing units, both single family homes and condominiums, are occupied by vacationers and weekend visitors and second home property owners. The 2000 U.S. Census estimates that 51% of the housing units in Birch Bay were for seasonal, recreational or occasional use. Of the 5,094 housing units counted in the 2000 census, 1,976 (39%) were single family detached, 558 (11%) were in multi-family structures, 1,776 (35%) were mobile homes, and 784 (15%) were boats, RVs or vans. There were 2.33 persons/household in the occupied dwelling units, on a weighted average basis.

It should be noted that the Birch Bay planning area differs from the Birch Bay Designated Census Place area. For example, the Census Place boundary extends up to Drayton Harbor, while the planning area's northern terminus is along Lincoln Road. Also, the most eastern part of the Hillsdale Neighborhood is in the planning area and not in the Census Designated Place. The 2000 population in the planning area is

estimated to be 4,485 persons, which is 90.4 percent of the Census Designated Place population. To bring the year 2000 housing count in line with the planning area, the above housing unit numbers need to be reduced by about 9.6 percent. The adjusted housing unit count in the planning area is estimated to be 4,799 housing units, including seasonal units, RVs and boats.

Based on field counts, Kask Consulting, Inc. estimated that 87% of the permanent housing units in the planning area are single-family and 13% are multi-family units. For planning purposes we have made an assumption that the mix of full-time single-family residential and multi-family residential units in the year 2022 will have changed to 80 percent to 20 percent. Based on 2000 U.S. Census data, it is assumed that approximately 50% of the seasonal/ recreational units will be mobile homes, recreational vehicles or condominiums. The remainder may be single-family homes or multi-family units undistinguishable from the full-time residences.

Applying the 80-20 ratio of single family units and multi-family units results in a total of 3,302 full-time single family housing units ( $4,128 \times 0.80$ ), 826 full-time multi-family housing units ( $4,128 \times 0.20$ ) and 4,128 seasonal housing units in the planning area in the year 2022.

The net projected increase in housing units from the year 2000 to 2022 for full-time single family housing units is 1,383 housing units and for multi-family housing units is 345 multi-family housing units, totaling 1,728 additional full-time housing units. An additional 1,728 seasonal housing units, time-share condos or RV spaces will be needed to accommodate seasonal residents in 2022 if the current ratio of seasonal to year-round homes remains constant.

## Land Demand Forecast

**Residential Land Forecast.** Field surveys show that there are 1,518 acres of land in residential use. This number includes condominiums and time-share facilities plus mobile home parks. The current overall residential density, therefore, is  $4,615 / 1,518 = 3.0$  residential units per acre.

The current Whatcom County zoning code lists the minimum lot size for UR-4 zone to be 8,000 square feet and the maximum density of development as 4 units per one acre. The lot size can be larger but not smaller. This means that a number of lots in UR-4 zone can be developed larger but not smaller. Therefore, unless all lots in all instances are developed at 8,000 square feet, the UR-4 zone will never reach the 4 units per acre net density. Since the builder or developer can build upon larger than 8,000 square foot lots, the density will be smaller than 4.0. The exception to the above restrictions is the Planned Unit Development or PUD. Under the PUD option, lot sizes can be smaller and overall density may be increased by 15 to 35%. The unbuilt land



area is required to be in green space or in some form (active or passive) recreational use. For the calculations in this plan, we have made the assumption that the future residential development will develop at the density of 4.0 units per acre of developable land. The plan proposes that minimum densities be established in the Birch Bay area for both single-family and multi-family areas.

A survey of single-family residential development in the Birch Bay area shows that conventional subdivisions have been developed at a gross density of about 2.60 housing units per acre. The gross density in PUD type of developments has been 3.24 housing units per acre. Maximum allowable density for mobile home parks, RV parks and time-share condominiums ranges from 7 units per acre for mobile home parks to as high as 22 units per acre for condominiums. Recreational vehicle parks may have 15 spaces per acre.

To arrive at the amount of developable land needed to accommodate the net increase in housing units from year 2000 to 2022 is to take the net increase in single family residential units and divide it by 4 units to the acre, resulting in the acres needed to accommodate the net increase in single family residential units, 346 acres (1,383/4). For multi-family residential units the acres needed to accommodate growth will be 35 acres (346/10). An additional 288 developable acres would be needed for the projected 1,728 seasonal/recreational units, assuming an average density of 6 units per acre (1,728/6). The total land area to accommodate the growth of 3,457 seasonal and year-round housing units amounts to 2,024 acres of net developable land in the planning area.

**Commercial Land Forecast.** The boundary for estimating the amount of commercial land needed to service the Birch Bay community extends beyond the planning area. As stated in earlier reports, the population base for estimating the commercial land is 12,000 to 15,000 people. A self standing municipality, that is not attached to a major city, requires about 386 acres of commercial land. Our field counts indicate that there are 71 acres of commercial land in existence in the Birch Bay community planning area, resulting in a net increased demand for commercial land of 315 acres. The estimated amount is based on comparison of the amount of commercial land in use by municipalities in the 12,000 to 15,000 population range.

## Land Use Vision, Goals and Policies

### Vision Statement

The following is a section of the Birch Bay vision statement as it relates to land use and development. The entire vision statement, including goals and policies, is presented in Chapter 5.

**Land Use and Development.** *"Land use and development patterns have changed significantly over the years. Tourist related developments such as hotels, motels, time-share condominiums, recreation vehicle parks, restaurants and other tourist related service facilities have been built along Birch Bay Drive, capturing the marine view of Birch Bay. The new tourist service related facilities have replaced some of the existing single-family residential uses along Birch Bay Drive. At the same time, much of Birch Bay Drive remains in single-family residential use. Commercial development, serving the resident population, is dispersed throughout the Community at specific nodes along the intersections of major roads and streets. Newly created employment centers, including high-tech industry, have chosen to locate adjacent to the numerous wetland areas creating idyllic campus-like setting. Residential development has retained its high-ground location, capturing the views of Birch Bay. Additional residential development has taken place in planned communities or subdivisions ranging in size of a few homes to hundreds."*

## Goals and Policies

The following are the goals and policies as they relate to land use. The entire set of goals and policies is presented in Chapter 5.

**Goal LU 1: To encourage development that fosters the community's long range vision of blending tourism related commercial use of land while maintaining a quality residential atmosphere.**

Policy LU-1a: Provide sufficient and appropriately located residential and commercial lands. (WCCP)

Policy LU-1b: Provide a range of land uses which considers location and market factors as well as required quantities of land. (WCCP)

Policy LU-1c: Assure that commercial development be contained within identified commercial nodes in order to avoid lineal commercial strips along arterial roads.

Policy LU-1d: Recognize the importance of tourism marketing that accentuates an appreciation of the aesthetics and natural features of the marine environment and its influence on various types of development.

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Policy LU-1e: In accordance with community goals for a residential and passive tourism atmosphere, place requirements on development which provide an emphasis on pedestrian access, view protection and regulations regarding upkeep of RVs and second homes.

Policy LU-1f: Discourage non-resort commercial activity along the shoreline other than that needed to provide for tourism related services.

Policy LU-1g: To avoid sprawl, adopt minimum residential densities of 4 units per developable acre in single-family residential areas and 10 units per developable acre in multi-family areas.

Policy LU-1h: Require land owners who obtain increased density through UGA expansion to purchase or transfer development rights from TDR sending areas designated under the Whatcom County Transfer of Development Rights (TDR) Program.

**Goal LU 2: To encourage development that complements each neighborhood's existing and/or desired character.**

Policy LU-2a: Identify and protect cultural and physical assets of each neighborhood. These assets should be defined through periodic neighborhood surveys and workshops.

Policy LU-2b: Maintain neighborhood character by enacting flexible design standards and incentives that ensure compatibility as infill occurs.

Policy LU-2c: Provide Planned Unit Development, density bonuses and clustering regulations that encourage preservation and enhancement of neighborhood values and assets.

**Goal LU 3: To encourage infill within partially developed portions of the UGA where public services and utilities are currently available prior to extending services to low density portions of the UGA.**

Policy LU-3a: Designate Long Term Planning Areas in portions of the Birch Bay Urban Growth Area where existing density is less than one house per five acres and sewer is not available.

Policy LU-3b: In addition to the criteria established in the Whatcom County Comprehensive Plan, require land owners or developers to design and finance sewer service, stormwater facilities of sufficient quality to capture runoff and prevent pollution of Birch Bay, and transportation improvements to serve proposed development prior to approving conversion to Short Term Planning Area.

## Alternative Land Use Plan Scenarios

The Birch Bay Community Plan Steering Committee looked at a number of alternative land use plan scenarios as they relate to commercial land development. The following alternative scenarios were considered:

1. Concentrate commercial development along Birch Bay Drive in the existing Resort Commercial zoning district.
2. Spread commercial development throughout the planning area in neighborhood commercial nodes.
3. Concentrate commercial development in selected commercial nodes at the intersections of arterial and/or collector roads.

After considerable review and debate, the Steering Committee chose a preferred alternative, a combination of alternatives 2 and 3. General commercial development is concentrated at the intersection of Blaine Road and Alderson Road and at the intersection of Blaine Road and Birch Bay - Lynden Road and at the intersection of Lincoln Road and Shintaffer Road. The Steering Committee proposed no change to the commercial development along Birch Bay Drive. Further, the Steering Committee stated that they wanted to retain all existing commercial zoning and commercial activities.

## Proposed Land Use Plan

### Growth Management Act Goals

The proposed land use plan is shown in Figure 8-4. The plan reflects the goals of the Growth Management Act; specifically the goal on urban growth which states the following: "Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner." The proposed plan meets that goal by channeling growth to areas that are currently served by sewer and water utility services by the Birch Bay Water and Sewer District. The proposed plan further channels growth to areas where existing water and sewer utility services can be extended.

The proposed plan also follows the GMA goal on sprawl stating: "Reduce inappropriate conversion of undeveloped land into sprawling, low-density development." The proposed plan follows this goal by proposing to extend only 100 acres of urban development into rural areas that are currently zoned for rural development, R-10A zoning district.

Further, the proposed plan supports the GMA goal on property rights, stating the following: "Private property shall not be taken for public use without just compensation having been made. The property rights of landowners shall be protected from arbitrary and discriminatory actions."

Finally, the proposed plan supports the GMA goal on citizen participation and coordination, which states the following: "Encourage the involvement of citizens in the planning process and ensure coordination between communities and jurisdictions to reconcile conflicts." Our Steering Committee and Neighborhood based planning structure supports this goal. Further, the current planning program is supported financially by a wide variety of interests, both public and private. Negotiations with major land owners, industries, and governmental entities such as the State Park, the Fire Districts, the School District, the Trillium Corporation, BP Cherry Point, Gold Star Resorts, and the City of Blaine are continually ongoing.

## **Whatcom County Goals and Policies**

The proposed plan meets the Whatcom County Comprehensive Plan land use goal 2A which states the following: "Ensure provision of sufficient land in all designations to accommodate the growth needs of Whatcom County and protect the qualities which make the county a desirable place to live. The proposed plan utilizes the existing zoning classifications and further, introduces the multi-family zoning classification to the Birch Bay area.

And finally, the proposed plan supports Whatcom County Comprehensive Plan goals 2G and 2H which state the following: "Encourage citizen participation in the decision-making process;" and "Preserve property rights while recognizing the

importance of the rights of the community, including protecting the natural environment and conserving resources."

### **Birch Bay Vision Statement and Goals**

The proposed plan is designed to express the land use and development section of the vision statement by channeling tourist related development such as hotels, motels, time-share condominiums, recreational vehicle parks, restaurants and other tourist related services along Birch Bay Drive. The proposed plan further follows the vision statement by dispersing general commercial development throughout the community at specific nodes along the intersections of major roads and streets such as the Blaine Road and Alderson Road and Lincoln Road and Shintaffer Road intersections.

The proposed plan further expresses the land use and development section of the vision statement by encouraging planned unit development to take place on land parcels greater than 40 acres. This section specifically refers to large single-ownership land holdings in the Birch Point neighborhood.

The proposed plan also supports the two land use goals and attendant policies, expressed earlier in this chapter, namely: "To encourage development that fosters the community's long-range vision of blending tourism related commercial use of land while maintaining a quality residential atmosphere;" and "To encourage development that compliments each neighborhood's existing and/or desired character."

### **Proposed Land Use Plan Concept**

The proposed land use plan is a composite of many parts. It has been designed to meet the above listed goals and policies and vision. In addition, the proposed land use plan addresses many other development and environmental issues. These issues are discussed in a summary form below. Taken together, they represent the proposed land use plan as shown in Figure 8-4.

#### **Goal Oriented**

1. Meets the Growth Management Act goals.
2. Is consistent with the Whatcom County Comprehensive Plan goals and policies.
3. Meets the Birch Bay vision statement and land use goals and policies.

### Development Density

1. Limits urban density development to the current urban growth area, plus 100 acres of current rural land east of the Blaine Road and south of the Alderson Road and minus approximately 620 acres in the Birch Point area and 125 acres in the Point Whitehorn area.
2. Establishes a minimum density of 4 housing units per developable acre as the minimum development density for new single-family residential development. Establishes a minimum density of 10 housing units per developable acre as the minimum development density for multi-family development. Critical areas, buffers and land dedicated for public facilities or open space shall not be counted in calculating minimum densities.

### Residential Land

1. Retains existing UR-4 and URM-6 zoning districts except 620 acres at Birch Point and 125 acres at Point Whitehorn removed from the UGA .
2. Encourages major land owners to develop any property greater than 40 acres as a planned unit development with 40 percent set aside for public and open space use.
3. Creates a multi-family zoning district around the general commercial district at Blaine Road and Alderson Road.

### Commercial Land

1. Reserves the Resort Commercial zoning along Birch Bay Drive for tourist related activities.
2. Locates additional commercial areas at the intersections of Blaine Road and Alderson Road, Lincoln Road and Shintaffer Road.

### Rural Land

1. Maintains the current urban-rural boundary with the exception of 620 acres at Birch Point and 125 acres at Point Whitehorn removed from the UGA and 100 acres east of the Blaine Road and south of the Alderson Road added to the UGA.

2. Retains the integrity of existing R-5A and R-10A zoning in the remaining rural lands.

### **Industrial Land**

1. Recommends setting aside land, west of Jackson Road, south of Grandview Road that is in the Cherry Point/Ferndale Subarea for light industrial development.

### **Mixed Use Land**

1. Because of the proximity of new large housing units one to one and a half miles from the Cherry Point Heavy Impact Industrial zone, the Birch Bay Steering Committee recommends that the concept of a mix of light industrial, open space, and parks and recreation be considered for the area west of Cherry Point, west of Jackson Road and south of Grandview Road. Because of this proximity and the attendant impacts, the Birch Bay Steering Committee should have representation when the subarea plan is reviewed for this area.

### **Shorelines and Critical Areas**

1. Keeps all identified wetlands out of development.
2. Protects shorelands and other critical areas.



Figure 8-4  
Proposed Land Use Plan

### Road and Utility Improvements

1. Recommends road improvements along Lincoln Road, Birch Bay - Lynden Road, Grandview Road, Blaine Road, and Harborview Road.
2. Proposes new road alignments along sections of Lincoln Road, Shintaffer to Birch Point Road, and a new road extending west from the Blaine Road to the vicinity of the existing golf course, east of Birch Bay Drive.
3. Discourages excessive and out of the area auto traffic movements along Birch Bay Drive.
4. Encourages pedestrian and bicycle oriented development by locating multi-family development adjacent to general commercial areas, such as the general commercial area at Blaine Road and Alderson Road.

### Zoning

1. Constructs the proposed plan using existing zoning classifications.

### Buildout Capacity of the Proposed Plan

Taking into consideration existing development, wetlands and other critical areas, existing zoning, development densities, utility and road right-of-ways, rural and urban distinctions, and other factors, the question is: "Can the proposed plan accommodate the projected growth of 3,457 year-round and seasonal housing units by 2022?" The answer to that question is "yes."

The analysis begins with the total land area in the planning area. From the total land area the amount of land in existing development is subtracted out. Also subtracted out is the land area in existing road rights-of-way, park and open space use, and all land devoted to government operations. Further, all zoned land for commercial uses, and industrial uses is subtracted out. The net result is gross land for residential development.

Not all gross residential land can be developed for residential uses. All identified wetlands are subtracted out, and so are future road rights-of-way (25 percent in urban areas and 10 percent in rural areas). An additional 25 percent of land is subtracted out to account for what is called a market factor. A market factor is a subtraction of developable land that is

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forever being held out of development. The assumption is that for a real estate market to function properly, about 25 percent of land must be on the market, available for purchase.

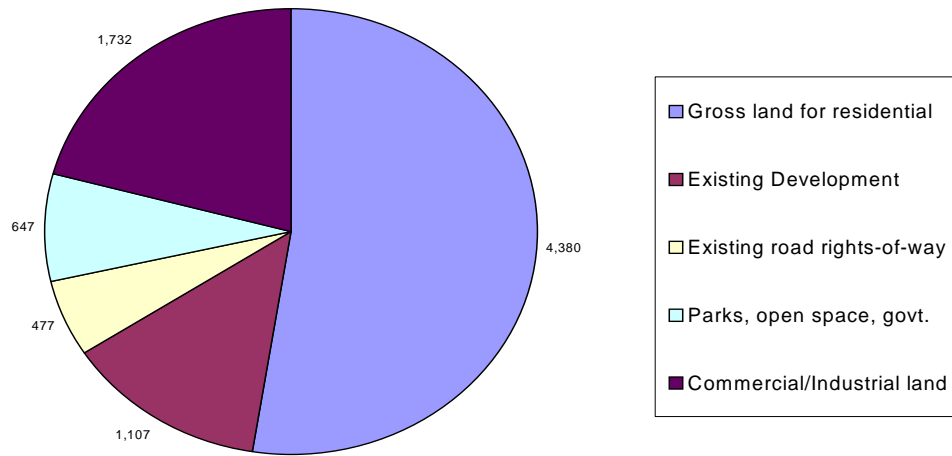
Having subtracted out wetlands, future road rights-of-way, and the market factor, results in net land for residential development. Multiplying the net residential land by the development density factor of 4.0 in the UR4 zone, 6.0 in the URM6 zone, 16 in the RC zone and dividing by 5 and 10 respectively in the R5A and R10A zones results in the build out capacity of developable land resulting in the number of housing units. Table 8-4 shows density calculations for the residential zoning districts within the Birch Bay Urban Growth Area. Table 8-5 shows buildout capacity for the total planning area.

Table 8-4 Density and Lot Size in Birch Bay UGA

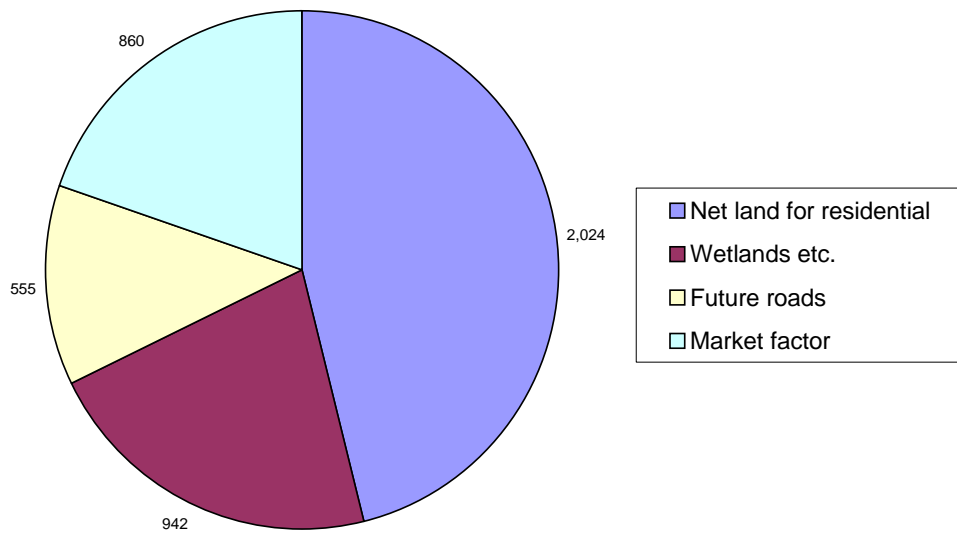
Zoning District	Density in LTPA (no water/sewer)	Density w. water and sewer	Lot size in conventional subdivision	Lot size in cluster subdivision	Lot size in Planned Unit Development
UR4	1/ 5acres	4/ acre	8,000 sq. ft.	6,000 sq. ft.	No minimum
URM 6	1/ 5 acres	6/ acre	7,200 sq. ft.	No minimum	No minimum
URM18	1/ 5 acres	18/ acre	7,200 sq. ft.	No minimum	No minimum
RC	1/ acre	7-22/ acre	6,000 sq. ft.	No minimum	No minimum

The total land area of the Birch Bay community planning area amounts to 8,343 acres or about 13. square miles. Of the total land area, 3,963 acres or 47.5 percent are not available for residential development. As shown in Figure 8-5, about 1,107 acres have already been developed in urban and rural uses. Existing road rights-of-way consume an additional 477 acres. Parks, open spaces and government uses consume another 647 acres. And, an additional 1,732 acres have been reserved for commercial and industrial development. This leaves 4,380 gross acres in the planning area for residential development of which 2,353 acres are in the UGA and 2,027 acres are Rural.

**Figure 8-5 Gross Land for Residential Development**



**Figure 8-6 Net Land for Residential Development**



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**Table 8-5**  
**Buildout Capacity for Planning Area**

	BIRCH BAY UGA RESIDENTIAL (excluding Birch Point & Pt. Whitehorn)		BIRCH BAY UGA COMMERCIAL/RECREATION			RURAL (Includes Birch Point & portion of Pt. Whitehorn)		CHERRY POINT UGA (within planning area)		TOTALS
ZONING DISTRICT	UR4	URM6	RC*	NC	GC	R5A	R10A	LII	HII	
<b>TOTAL ACRES</b>	2,185	1,262	317	18	103	1,961	786	482	1,229	8,343
<b>OCCUPIED OR COMMITTED ACRES</b>										
Existing Development	242	380	131	7	10	242	95	0	0	1,107
Parks, Open Space, Government	149	187	45	0	2	218	8	0	38	647
Existing Roads	125	72	18	1	6	112	45	28	70	477
Commercial/Industrial Land			62*	10	85			454	1,121	1,732
<b>VACANT RES. LAND (ACRES)</b>	1,669	623	61*	0	0	1,389	638	0	0	4,380
<b>LESS:</b>										
Wetlands, buffers, streams	681	241	20	N/A	N/A	N/A #	N/A #			942
Future Rds. (25% in UR, 10% in R)	247	96	10	N/A	N/A	139	64			555
Market Factor (25%)	247	96	10	N/A	N/A	347	160			860
<b>NET RES. LAND AVAILABLE (ACRES)</b>	494	191	21	0	0	903	415	0	0	2,024
x residential density@	4/ac.	6/ac.	26/ac.	N/A	N/A	1/5 ac.	1/10 ac.	N/A	N/A	
<b>NEW HOUSING UNIT CAPACITY</b>	1,976	1,146	328	0	0	181	41	0	0	3,672

\* Assumes that half of vacant RC land will develop as condominium or time-share units (remainder will be commercial or recreational)

# Wetlands are not subtracted from Rural Zoning (5 and 10 acre lots can include wetlands)

Gross developable land has to be further scaled back to account for wetlands, road rights-of-way, and a market factor to assure the proper functioning of the real estate market. As shown in Figure 8-6, about 2,024 net acres of land are available for residential development in the planning area, 706 acres in the UGA and 1,318 acres of Rural land. Wetlands consume 942 acres, road rights-of-way consume another 555 acres, and the market factor 860 acres, leaving a balance of 2,024 net acres for residential development in the planning area.

**Development Densities.** Development density is a number that is derived by dividing the number of housing units by the number of acres of developable land. The Growth Management Hearings Boards, in interpreting the meaning of the Growth Management Act, state that land in any urban growth area should be developed at the density of at least 4 housing units per one acre of developable land. The controversy comes in defining developable land. There is "gross" developable land and "net" developable land. Gross developable land generally means raw developable land that includes road rights-of-way, wetlands, open space and other open lands, such as the market factor.

Net developable land, on the other hand, means land that is devoted exclusively for residential (single and multi-family) building lots. Even the net developable land definition has its peculiarities. For example, wetlands on a building lot can be counted toward meeting the minimum lot size, if a structure can be adequately sited on the lot, considering setbacks for wetlands and public rights of way. Whatcom County, in their administration of the zoning code, defines density as "gross" density. Therefore, this plan looks at both the gross and net density and draws the following conclusions.

Figure 8-7  
Proposed Urban Growth Boundary

The proposed Birch Bay Urban Growth Area has the following development densities:

### **Residential Land- Including Multi-family**

Gross development density: 3,450 housing units / 2,353 acres (after subtracting Rural areas) = 1.47 dwelling units per acre.

Net development density: 3,450 housing units / 706 acres = 4.89 dwelling units per acre.

**Conclusion.** As shown in Table 8-5, the buildout capacity of the proposed UGA is 3,450 housing units. The demand for housing units in the year 2022 is 3,457 seasonal and full-time units. The land demand and supply figures are nearly equal and thus considered adequate. To avoid an over supply of land and prevent sprawl, the Long-Term Planning Areas will be retained at rural density until the Short Term Planning Areas have infilled at urban densities and infrastructure to support urban development is available.. As shown in Table 8-5, the proposed urban growth area has adequate buildable land supply to accommodate 3,450 housing units. . The rural area in the Birch Bay planning area can now accommodate 222 housing units.

When measured in terms of development density, the proposed Birch Bay Urban Growth Area is within the bounds of the Growth Management Act. The net residential density within the Birch Bay Urban Growth Area is 4.89 housing units per developable acre.

The conclusion is that the proposed plan has adequate land to accommodate the projected 20 year growth. In addition, a 100 acre piece of land, proposed for multi-family development, east of Blaine Road and south of Alderson Road, is also included in the proposed urban growth area. Currently, this 100 acre piece of land is in R-10A zoning. The proposed urban growth boundary is shown in Figure 8-7.

### **Action Strategies**

1. Revise Whatcom County Code Urban Residential (UR) and Urban Residential Medium (URM) zoning text to require a minimum net density of 4 units per developable acre within Urban Growth Areas, excluding critical areas.
2. Develop a new multi-family zoning district, or modify the existing URM district, to require minimum residential density of 10 units per developable acre and allow a maximum density of 24 units per acre, subject to the purchase of development rights. Apply this zoning district to multi-family portions of the Birch Bay Urban Growth Area.



## LAND USE

3. Revise the Whatcom County Code to designate Transferable Development Rights sending and receiving areas within the Birch Bay Urban Growth Area.
4. Consider building height increases in commercial and multi-family residential zones to allow density increase without increasing impervious surfaces.

## Chapter 9

# HOUSING

## Existing Conditions

### Number and Type of Housing Units

**Year 2000 US Census.** The year 2000 US Census data shows that Birch Bay was the fastest growing area in Whatcom County. Housing units grew from 2,699 in 1990 to 5,105 in 2000, resulting in an 89.1 percent increase. For the same ten year period, housing unit growth in Whatcom County amounted to 48.8 percent. Based on the 2000 U.S. Census, the average number of persons per occupied housing unit amounted to 2.33 in Birch Bay and 2.26 for Whatcom County.

The US Census defines Birch Bay as "Birch Bay Census Designated Place." The boundaries of the Birch Bay Census Designated Place are somewhat larger than the Birch Bay community planning area. The boundaries of the Birch Bay Census Designated Place and the Birch Bay community planning area are shown on Figure 3-1.

**Birch Bay Community Planning Area.** A housing unit count was conducted in the spring of 2001. Table 9-1 shows the type and number of housing units counted in the Birch Bay Census Designated Place. Housing units were classified as single family residential units, condominiums or apartment units. Since the survey was a drive-by survey, it was not possible to determine with great accuracy whether a particular unit was a market rental apartment or a condominium. There were 2,933 single family units, 394 condominium units, and 35 apartment units, a total of 3,362 housing units.

# HOUSING

**Table 9-1**  
**HOUSING CHARACTERISTICS**  
**Birch Bay Census Designated Place - 2000**

Data	Birch Bay CDP*	Whatcom County	State of Wash.
Housing units			
Total housing units	5,105	73,893	2,451,075
Occupied	2,125	64,446	2,271,398
Vacant	2,960	9,447	179,677
Seasonal / occasional use	2,620	5,946	60,355
Vacancy rate			
Home owner	6.0	2.2	1.8
Rental	21.1	5.7	5.9
Occupied housing units			
Owner occupied	1,614	40,876	1,467,009
Renter occupied	511	23,570	804,389
Average household size			
Owner occupied	2.28	2.63	2.65
Renter occupied	2.49	2.31	2.32

**Government Housing.** Whatcom County Parks and Recreation Department leases a 30 bed youth hostel, located at the Bay Horizon Park. In addition, the Whatcom Housing Authority, a governmental organization, owns and operates 24 single family homes, know as Loft Lane Homes, located at the northwest corner of the Bay Horizon Park. The 24 single family homes are enrolled in Section 8, US Department of Housing and Urban Development's rent subsidy program.

## Cost of Housing

**Single Family Home Sales.** As reported by the Whatcom County Real Estate Research Committee, there were 189 single family home sales in the year 2000, in an area they define as Birch Bay. In

## HOUSING

general, their definition of Birch Bay includes all of the Birch Bay community planning area plus all land south of Drayton Harbor and includes Semiahmoo Spit. The total dollar value of the 189 sales amounted to \$36.8 million, resulting in an average sales price of a single family home to be \$194,900. Subtracting out the high and low at each end results in an average sales price of \$180,900.

Since the Birch Bay community planning area excludes all land north of Lincoln Road, a number of single family home sales need to be subtracted from the previous totals. Within the Birch Bay community planning area, there were 159 single family home sales in the year 2000, totaling \$25.7 million. The average sales price was \$161,500. Again, subtracting out low and the high on each end results in an average single family home sales price of \$144,300.

In Whatcom County, during the year 2000, there were 2,911 single family home sales, totaling, \$486.2 million. The average sales price amounted to \$167,000 while the median price amounted to \$144,500. There were 140 fewer sales in 2000 than 1999 but the average sales price rose 6.2 percent while the median sales price rose 3.2 percent. Average price is sensitive to the number of high-priced homes sold, the median price is a superior measure of price appreciation in the market. The median new home sales price of \$165,600 in 2000 was below the median new home price of \$166,900 in 1999 by about 0.8 percent.

**Condominium Sales.** Condominium sales in the Birch Bay area in the year 2000 amounted to 43 units with an average sales price of \$93,500. The average size of a condominium in Birch Bay was 1,028 square feet with an average cost per square foot amounting to \$92. In Whatcom County, there were a total of 342 condominium sales in the year 2000 with an average sales price of \$118,500.

**Apartment Rents.** The Apartment Vacancy Report, published by Dupre & Scott Apartment Advisors shows that the average rental paid for an apartment in Whatcom County in year 2001 declined to \$608 per month, down from \$613 the year before. The average rental rate ranged from \$443 per month for a studio apartment to \$836 for a three bedroom with two bathrooms apartment. The vacancy rate for apartments in Whatcom County in the year 2001 amounted to 2.6 percent.

**Cost of New Construction.** The Whatcom County Real Estate Research Committee reports that the average price of a new house in Whatcom County in the year 2000 was \$189,800. A new house in the Birch

Bay Area (includes the area north of Lincoln Road) was \$227,200. The most popular new house in the Birch Bay Area was a three bedroom home of 1,782 square feet, costing \$203,400, resulting in a \$114 per square foot cost. A summary and a comparison of housing costs by type of housing and by location is shown in Table 9-2.

### Absentee Ownership Factor

Many houses in the Birch Bay community planning area are second homes and remain vacant for significant periods of time throughout the year. Some homes are occupied on weekends and remain vacant during the work week. Of the 5,105 housing units in the Census Designated Place, 2,960 are vacant. Of the 2,125 occupied housing units, 1,614 are owner occupied and 511 are renter occupied. The persons per owner occupied housing units are 2.28 and persons per housing unit of renter occupied units are 2.49, resulting in a weighted average of 2.33 persons per occupied household in Birch Bay.

### Households by Income Group

**Household Income.** The Washington State Office of Financial Management reports that median household income in Whatcom County in 1999 was \$40,637. The median household income for the State of Washington for the same year was \$47,897. The household income is incrementally broken down as shown in Table 9-3.

Column two in Table 9-3 shows the percent of total households in Whatcom County by income grouping. This information for the Whatcom County and is provided by the Washington State Office of Community Development. A significant part of the lower income groupings are made up of elderly over 65 years of age who are on Social Security pension and students attending Western Washington University.

**Low-Income.** For the purpose of this document, low-income is defined the same as it is defined by the US Department of Housing and Urban Development (HUD) and as stated below:

Extremely low-income	30 % of median income and below
Very low-income	31-50 % of median income
Low-income	51-80 % of median income

## HOUSING

**Table 9-2**  
**HOUSING COST BY TYPE BY LOCATION**  
**Birch Bay**

Type of Housing	Birch Bay Commun. Planning Area*	Birch Bay Area**	Whatcom County
Single Family Home			
Average price	\$161,500	\$194,900	\$167,000
Median price			\$144,500
Median price (modified)***	\$144,300	\$180,900	
Average price increase			6.2 %
Median price increase			3.2 %
New home sales price			\$166,900
New home sales price increase			-- 0.8 %
New home construction cost		\$227,200	\$189,800
Condominiums			
Average price		\$93,500	\$118,500
Average size		1,028 sq ft	
Apartments			
Average rental			\$608
Vacancy rate			2.6 %

\* Birch Bay community planning area

\*\* Birch Bay area, all of Birch Bay community planning area plus the area north of Lincoln Road and south of Drayton Harbor, including Semiahmoo Spit

\*\*\* Modified to subtract out the extreme low and extreme high values

## HOUSING

**Table 9-3**  
**ESTIMATED HOUSEHOLD INCOME - 2000**  
**Birch Bay**

Income Range	Whatcom County Percent of Households	Birch Bay No. of Households
Less than \$9,999	8.8	187
\$10,000 to \$14,999	6.8	144
\$15,000 to \$19,999	7.5	159
\$20,000 to \$24,500	7.3	155
\$25,000 to \$29,999	6.6	140
\$30,000 to \$34,999	7.5	159
\$35,000 to \$39,999	6.5	138
\$40,000 to \$44,999	6.0	128
\$45,000 to \$49,999	5.5	117
\$50,000 to \$59,999	9.1	193
\$60,000 to \$74,999	10.7	227
\$75,000 and above	17.6	374

The US Housing and Urban Development publishes the median annual income statistics. For reference, 2001 annual incomes considered low-income by HUD for a family of four in Whatcom County are:

Extremely low-income	
30 % of median income and below	\$14,900
Very low-income	
31-50 % of median income	\$24,800
Low-income	
51-80 % of median income	\$39,700

The number of households in Birch Bay that can be classified as low-income are listed in Table 9-4.

**Poverty.** US Department of Housing and Urban Development defines poverty as those households that earn less than \$12,000 per year. In Whatcom County, 11.6 percent of households earned less than \$12,000 per year in 1999. Applying the same percentage to Birch Bay results in 246 households being classified as being in poverty, those households that earn less than \$12,000 per year.

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**Table 9-4**  
**NUMBER OF LOW-INCOME HOUSEHOLDS**  
**Birch Bay**

Low-Income Grouping	Number of Households
Extremely low-income	332
Very low-income	314
Low-income	438

### Affordable Housing

It is an obvious statement that different income household groups can afford different cost of housing. It is generally accepted that households that pay more than 30 percent of their gross income on housing are considered in distress. Differentiation is also made as to whether the housing is rental housing or owner occupied housing. Table 9-5 lays out criteria for affordable housing as it relates the year 1999 income and the conditions as they exist at Birch Bay.

### Housing Demand and Supply

There is no visible evidence of homelessness at Birch Bay. Therefore, it is safe to assume that housing supply is meeting housing demand. There appears to be adequate supply of affordable housing that are currently occupied as seasonal residences. As the demand for year-round housing increases, these housing units may become the source of supply to the low income families that may wish to move to the area. However, are there some low income households paying more than 30 percent of their gross income on housing? If yes, then there is a housing problem that needs to be addressed. Table 9-6 compares housing demand with housing supply for a number of income categories.

The demand for extremely low and very low income level housing is met, primarily through the presence of mobile homes. In 1999, there were 678 mobile homes in the Birch Bay area. Of the total 678 mobile homes, 617 were assessed below \$75,000. An argument can be made that the housing demand in the extremely low and very low income categories are



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met through the presence of mobile homes. The above numbers need to be reviewed and adjusted after the year 2000 US Census data on housing becomes available, the summer of 2002.

**Table 9-5**  
**AFFORDABLE HOUSING COSTS PER INCOME LEVEL**  
**Birch Bay**

<b>Income Level</b>	<b>Percent of Median Income</b>	<b>Yearly Household Income</b>	<b>Monthly Household Payments</b>	<b>Purchase Cost</b>
Extremely low	0 to 30	0 to \$14,900	0 to \$373	\$44,700
Very low	30 to 50	\$14,900 to \$24,800	\$374 to \$621	\$44,700 to \$74,400
Low	50 to 80	\$24,800 to \$39,800	\$622 to \$994	\$74,400 to \$119,400
Above low	above 80	above \$39,800	\$995 and above	above \$119,400

*Income level* - based on HUD criteria

*Percent of median income* - based on HUD criteria

*Yearly household income* - based on 1999 county median income

*Monthly household payments* - based on 30 % of monthly gross income

*Purchase cost* - based on three times the annual income (owner occupied)

## Projected Housing

### Number of Households by Income Group

The number of households is projected to increase from the current 2,125 households in the year 2000 to 4,120 households in 2022. It is assumed that most of the 1,995 additional households that move to the area in the next twenty year period will be above the low income category. A natural reduction in the elderly group (65 years +) will take place. Some of the extremely low, the very low and low income housing units will be freed up and will be reoccupied by new elderly population moving to the area. Therefore, it is assumed that the growth in households from year 2000 to 2022 will be in the income category above low income. The cutoff for low income, in terms of housing cost is \$119,400 in year 2000 dollars. The demand and supply for low income housing from 2000 to 2022 will remain at the year 2000 level. Some of the low income housing need will be met by the conversion of seasonal cabins and cottages to year round residences.

**Table 9-6**  
**HOUSING DEMAND AND SUPPLY**  
**Birch Bay**

Income Level	Monthly Household Payments	Purchase Cost	Housing Demand	Housing Supply	Unmet Demand
Extremely low	0 to \$373	0 to \$44,700	332	NA	NA
Very low	\$374 to \$621	\$44,700 to \$74,400	314	214	100
Low	\$622 to \$994	\$74,400 to \$119,400	438	495	--
Above low	\$995 and above	above \$119,400	1,041	1,428	--

*Housing demand* - Source: Consolidate Housing Action Plan, Bellingham/Whatcom County Housing Authority, 2001

*Housing supply* - Source: Comprehensive Study of Affordable Housing in Whatcom County, Wm. T. Follies, Realtors, 1999

### Number of Housing Units

The year 2000 US Census population count for Birch Bay Designated Census Place is 4,961 persons. The housing unit count is shown as 5,105 housing units. This means that there are more housing units than persons. The 2000 U.S. Census reports that 2,620 housing units, or 51 percent of the total housing units, were for seasonal, recreational or occasional use.

From the field counts we were able to determine that the mix of single family residential units and multi-family residential units was 87 percent to 13 percent.

It should be noted that the Birch Bay Community planning area differs from the Birch Bay Designated Census Place area. For example, the Census Place boundary extends up to Drayton Harbor, while the Community planning area northern terminus is along Lincoln Road. Also, the most eastern part of Hillsdale Neighborhood is in the Community planning area and not in the Census Place. The population in the Planning area is 4,485 persons, which is 90.4 percent of the Census Place population. To bring the housing count in line with the Planning area the above housing unit numbers need to be reduced by about 9.6 percent.

For planning purposes we have made an assumption that the mix of full-time single family residential and multi-family residential units in the year 2022 will have changed to 80 percent full-time single family/20 percent multi-family.

Applying the 80-20 ratio of single family units and multi-family units to the projected 2022 demand for full-time housing units results in 3,302 full-time single family housing units ( $4,128 \times .80$ ) and 825 full-time multi-family housing units ( $4,128 \times .20$ ). In addition, 4,128 seasonal or recreational housing units, are projected in the year 2022. The seasonal units will likely be a mix of single-family homes, mobile homes, condos and RV sites.

The net increase in housing units from the year 2000 to 2022 for full-time single family housing units is 1,383 housing units, for full-time multi-family housing units is 345 multi-family housing units, and for seasonal recreation units is 1,728, totaling 3,457 total new housing units.

## Demand and Supply for Housing

The assumption is that the future housing demand will be met by three different housing market sectors. The low income housing needs will be met by existing stock, consisting primarily of mobile homes in mobile home parks. Resales of existing housing stock will take place. The above two housing market sectors will contribute to the effective operation of a housing market but will do very little in meeting the forecasted housing needs. New construction bears the brunt of meeting the forecasted housing growth in Birch Bay. As stated earlier, by 2022, Birch Bay is forecasted to receive 1,383 single family housing units and 345 multi-family housing units, and 1,728 seasonal or recreation units totaling 4,235 new housing units. The above forecasted numbers continue to make the assumption that the area will remain a resort community with a significant number of seasonal homes.

## Housing Goals and Policies

Goal HO 1: To provide a mix of housing that reflects the residential and resort atmosphere of the community and that enhances individual neighborhood vitality.

Policy HO-1a: Provide for a range of income levels. In addition, there should be diversity in design while maintaining a commitment to quality.

Policy HO-1b: To encourage and provide incentives for housing projects that preserve natural resources, view sheds and wildlife habitat.

Policy HO-1c: To encourage and provide incentives for housing projects that help to foster pedestrian and bicycle access to both neighborhood commercial centers and community facilities.

Policy HO-1d: To encourage and provide incentives that emphasize energy efficient homes, businesses and community facilities.

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Goal HO 2: To recognize that a key component to achieving the community's vision is the manner in which affordable housing is provided and maintained.

Policy HO-2a: Provide incentives and subsidies to preserve, while enhancing, existing affordable housing.

Policy HO-2b: Encourage multifamily and/or smaller lot size housing that meets the needs of special populations and that are located near support services and community facilities.

Policy HO-2c: Explore all available federal, state, local and private options for financing affordable and special needs housing.

Policy HO-2d: Implement programs and regulations for education, encouragement and enforcement related to the upkeep of permanent and seasonal single family houses and mobile homes.

## Action Strategies

1. Promote and support land use planning decisions that preserve and enhance property values.
2. Encourage governmental entities, such as the Bellingham/Whatcom County Housing Authority to invest in low-income housing in the area.
3. Using zoning powers to maintain a healthy balance between single-family, multi-family, condominium and mobile home style housing.
4. Encourage cluster housing development thus preserving significant amounts of open and green space.
5. When designing residential subdivisions, design it with nature in mind, taking into consideration and utilizing natural landscape.
6. The Birch Bay Community Plan Steering Committee recommends to Whatcom County that the Resort Commercial zoning (RC) Chapter in the Zoning Code be modified to allow mixed use development where 1/3 or 33 percent of the floor

## HOUSING

area of a permitted multi-family residential structure can be constructed as commercial space, ranging from retail to services to office uses.

7. Promote residential development to take place on building lots that have already been platted (in-fill).
8. Assure that development impacts of major developments are adequately identified and mitigation actions implemented.
9. Encourage the Whatcom County Planning Department to require adequate low cost housing units when approving Planned Unit Development in the Birch Bay area.

## Chapter 10

# UTILITIES

## Utility Districts Serving Birch Bay

Water and sewer services for the Birch Bay area are provided primarily by the Birch Bay Water and Sewer District. The service boundary of the Birch Bay Water and Sewer District covers about 6,700 acres and is shown in Figure 10-1. The District presently purchases potable water from the City of Blaine and distributes it to its metered customers through a District owned piping system. The District operates a wastewater treatment plant located south of the Birch Bay State Park. The Birch Bay Water and Sewer District is governed by three publicly elected commissioners and managed by professional staff.

In addition to the Birch Bay Water and Sewer District, two additional water districts provide water to the residents of Birch Bay area. They are the Bell Bay Jackson Water Association and the Grandview Beach Water Association as shown in figure 10-1. The Bell Bay Jackson Water Association serves about 100 customers along Bay, Jackson and Kickerville Roads. The smaller Grandview Beach Water Association is located along the beach, south of Point Whitehorn, and serves about 15 customers. Customer demands and government regulations may necessitate the annexation of the Bell Bay Jackson Water Association and the Grandview Beach Water Association into the Birch Bay Water and Sewer District, or assumption of these systems by the County or PUD in the event the associations could not continue to serve their customers.

## Water

### Water Supply

As stated above, the Birch Bay Water and Sewer District purchases its water supply from the City of Blaine. The District and the City, just recently renewed their water supply agreement so that the District can purchase water to meet its customer demand. The contract extends for a period of 30 years with options for renewal after that. Currently the District uses about 1.4 million gallons per day on maximum days and the new agreement provides for up to 2.11 million gallons per day for maximum day

supply. Water is pumped through a main supply station to three ground level reservoirs. These reservoirs, together with two booster pump stations, serve a fully metered distribution system. In addition to the City of Blaine water supply, the District recently drilled a well that has a measured capacity of about 500 gallons per minute. The District is waiting for Washington State Department of Ecology's approval to begin withdrawal of water from the well. The Department of Health will also require completion of planning and source protection documents, and additional infrastructure will be necessary before the third well can be put into service.

Further, the Birch Bay Water and Sewer District has a contract with Whatcom County PUD 1 for delivery of 3 million gallons per day of water from the Nooksack River. This contract is currently being updated.

### **Water Consumption**

Today, the peak day demand for water in the Birch Bay Water and Sewer District amounts to about 1,057 gallons per minute, serving a permanent population of about 3,200 persons, plus an undetermined number of seasonal persons. The District has approximately 3.1 million gallons of storage and this should be sufficient for the projected water demands for the next twenty years. However, additional storage will be necessary to improve or expand service to the water service area above 100 feet in elevation.

CHS Engineers, Inc., consultants to the Birch Bay Water and Sewer District, estimate that by the year 2011, the peak day supply requirement will increase to 1,200 gallons per minute, assuming effective conservation efforts. .

In addition to supplying potable water to the Birch Bay residents and commercial customers, the Birch Bay Water and Sewer District also provides wholesale water to Whatcom County Public Utility District #1, for distribution to the British Petroleum - Cherry Point facility. Wholesale



Figure 10-1  
Utility Districts

distribution to British Petroleum - Cherry Point is expected to continue for the foreseeable future. It is understood by British Petroleum - Cherry Point that their water is of the lowest priority to the Birch Bay Water and Sewer District and that service may be interrupted if water is required by the District's customers. The District, at this time, does not provide water for new golf course irrigation. Two golf courses that connected to the system prior to 1991 are still being served by the District for irrigation. The District has initiated a number of water conservation measures. Recently, the Washington State Department of Ecology recognized the Birch Bay Water and Sewer District for having one of the best managed waste water treatment plants in the State of Washington.

### Water Distribution System

The water distribution system consists of three reservoirs, totaling 3.1 million gallons. The distribution system is made up of water mains measuring up to 16 inches in diameter. In addition there are two booster pump stations and eight pressure reducing valve mechanisms. Table 10-1 shows the amount of pipe by pipe size. Figure 10-2 shows the District's current water distribution area.

**Table 10-1**  
**Existing Water System Pipe Quantities**  
**Feet**

Pipe Size	Linear Feet
4 inches or less	69,900
6 inches	62,900
8 inches	122,700
10 inches	64,900
12 inches	25,400
14 inches	15,100
16 inches	7,300
Total	368,200

Note: Linear footage rounded to nearest 100

Figure 10-2  
Water Service Area

### Capacity to Serve Future Water Demand

**Supply.** Is there adequate supply to serve future water demand as projected in the land use plan? Will the Blaine source be adequate to supply the year 2022 water needs for Birch Bay?

On 2 April 2002, the District entered into a 30 year agreement under which the City of Blaine is obligated to deliver water adequate to meet the District's projected water supply needs through 2022. The water contract for delivery will be supplied under existing water rights not requiring further approval from the State Department of Ecology. The District, moreover, has a pending application for additional groundwater rights (500 gallons per minute) and transfer of 3 million gallons per day from the Nooksack River by means of a contract with Whatcom County PUD 1 (once again utilizing existing water rights). In addition, the District has actively participated in the aforementioned Whatcom Regional Interagency Watershed planning process.

The year 2021 peak day water consumption demand is estimated to amount to about 1,500 gallons per minute, assuming effective conservation efforts.

**Distribution.** Will the District be able to deliver the water service to developing areas in the Birch Bay planning area? The answer to that question is yes. The area currently being serviced with water is shown in Figure 10-2. As shown in Figure 10-2, it will not be hard to supply water to areas currently not being served by simply extending existing service. Any significant expansion, however, needs to be accompanied by expanding the storage capacity in higher pressure zones for fire flow and reliability.

The cost of extending water service is born by the user. A user can be a single family home on a platted lot or it can be a developer building an entire subdivision of multi-unit condominiums. A builder or developer pays the entire cost of bringing the water line to the site, plus a connection charge. Any costs associated with fire flow requirements are also paid by the builder or developer.

### Wastewater

#### Treatment Capacity

As stated above, the Birch Bay Water and Sewer District provides wastewater collection and treatment services to the residents and commercial customers in the Birch Bay area. The service began in 1976 when the District's 0.5 million gallons per day wastewater treatment plant went into operation. The capacity was expanded to 1.28 million gallons per day in 2001, thereby creating a growth capacity of 0.33 million gallons per day. This added treatment capacity is estimated to be adequate to at least the year 2007. Other improvements are planned that will bring the treatment capacity to 1.4 million gallons per day and to 1.95 million gallons per day. The peak summer plant flows are approximately 700,000 to 950,000 gallons per day. The wastewater treatment plant discharges to the Strait of Georgia via a 24 inch gravity out-fall. The out-fall discharge capacity is 5.9 million gallons per day. There are no controlled overflows from the wastewater collection system to the environment.

#### Collection System

The collection system is composed of approximately 46 miles of gravity and pressure sewers including 10 lift stations. The lift stations along Birch Bay Drive are the backbone of the collection system. As of March 1998, there were 4,956 sewer residential customer equivalents (RCE's) connected to the sewer system. Existing sewer pipe quantities are presented in Table 10-2.

#### Capacity to Serve Future Sewer Service Needs

**Treatment Plant Capacity.** As stated earlier, the treatment plant has the capacity to treat 1.28 million gallons per day. The current reserve capacity is about 0.33 million gallons per day. This reserve capacity should be sufficient to treat the increased load through 2007.

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**Table 10-2**  
**Existing Sewer Pipe Quantities**  
**Feet**

Size of Sewer Pipe	Linear Feet
6 inch	400
8 inch	154,400
10 inch	9,000
12 inch	14,300
14 inch	200
15 inch	26,400
18 inch	16,100
21-27 inch	300
Force main	29,000
Out-fall	7,700
Total	257,700

The Birch Bay Water and Sewer District's forecasts of wastewater flows indicate that the District needs to nearly double the capacity of the treatment plant by the year 2020. The current capacity of 1.28 million gallons per day needs to be increased to about 2.0 million gallons per day in 2020.

**Collection System.** A wastewater collection system, composed of gravity flow pipes, force-mains, and pump stations, is in place and it covers a good part of the Birch Bay planning area. The area that is serviced by sewers is shown in Figure 10-3. As can be seen in Figure 10-3, sewer services could be extended to currently non-service areas. Some unserved areas will require new trunk lines, pump stations, force mains or other system improvements.

From the financial point of view, it is the responsibility of the builder or developer to pay for the sewer extensions to the building site. The builder or developer is also required to pay a sewer hookup fee. This fee is collected to create a reserve fund which will be expended on system-wide improvements and expansion of the wastewater treatment plant.

Figure 10-3  
Sewer Service Area

### Stormwater Management

Stormwater management in the Birch Bay planning area is handled by Whatcom County Public Works Department. Stormwater problems are solved or mitigated as they appear, on a case by case basis. Most of the stormwater problems are created by runoff from man made impervious surfaces. All stormwater drainage eventually ends up in Birch Bay, Drayton Harbor and the Strait of Georgia. The Whatcom County Public Works Department is conducting a study of shoreline and associated upland drainage and stormwater issues. The results of this study should be a key component in devising short and long range stormwater action plans.

Stormwater management associated with new development is the responsibility of the builder or developer. The County has a threshold, above which a building or development needs to adhere to stormwater management requirements. Stormwater management requirements are spelled out in a stormwater management manual.

An inventory was taken of all man-made stormwater management facilities. Each facility was plotted on a map and these maps appear in each of the Neighborhood Baseline Data Reports. For example, stormwater facilities consisting of a number of culverts in the Point Whitehorn Neighborhood are shown in figure 18 in the Point Whitehorn Neighborhood Baseline Data Report.

### Utilities Vision, Goals and Policies

#### Vision of Utility Services

*“Endless supply of fresh water, that was taken for granted many years ago, no longer exists. The Birch Bay Water and Sewer District has been able to meet the growing fresh water demand by a combination of increasing its supply, curtailing its use by conservation measures and using treated wastewater to irrigate golf courses and supply industrial users. The wastewater collection system has been expanded and the treatment plant has been enlarged. All of the troubled septic systems along Drayton Harbor have been corrected, either by connecting them to the sewer system or by modernizing their operations through technological advances. Improved utility systems have significantly improved the water quality conditions in Drayton Harbor. Oyster growers are again bringing in abundant healthy crops.”*



### Goals and Policies - Water and Sewer

- Goal UT 1: To assure that proposed commercial and housing projects do not jeopardize existing utilities service levels.
- Goal UT 2: To provide water and sewerage systems that are safe and that adequately provide for projected growth.
- Goal UT 3: To coordinate utility planning among the Birch Bay Water and Sewer District, City of Blaine, Whatcom County and other agencies.
- Goal UT 4: To implement conservation measures that complement the community's commitment to stewardship of resources and that result in long-range economic benefit.
- Goal UT 5: To assure that utility corridors are located, built and maintained in a manner that provides the least amount of impact possible on neighborhood and community landscapes.

Policy UT-5a: Explore possibilities to maximize joint utility corridors for both above and below ground lines.

Policy UT-5b: Protect viewsheds wherever and whenever possible.

### Stormwater Management Goals and Policies

- Goal SW 1: To protect water resources and natural drainage systems by controlling the quality and quantity of stormwater runoff.

Policy SW-1a: Designate the Birch Bay watershed as a "Stormwater Special District" under Whatcom County Code 20.80.635, Stormwater special districts.

Policy SW-1b: Develop Low Impact Development standards to encourage narrow streets, preservation of

## UTILITIES

pervious surfaces, retentions of trees, natural vegetation and on-site stormwater infiltration.

Policy SW-1c: Include the Birch Bay Watershed as a “water resource special management area” in Whatcom County Code 20.80.735, Water resource special management areas, critical areas and critical area buffers; applying only sections (2) (a), (b), and (c), which address temporary sediment and erosion control, phased clearing and soil stabilization Respectively.

Policy SW-1d: Review zoning density and development standards in areas where engineering standards may not be sufficient.

Policy SW-1e: Avoid stormwater infiltration adjacent to eroding bluffs in areas where increased stormwater infiltration would exacerbate slope instability problems.

Goal SW 2: To implement stormwater management policies and strategies which recognize the value of wetland areas in solving stormwater problems.

Goal SW 3: To implement on-going monitoring of stormwater so that fresh and salt water quality problems can be identified early on.

## Action Strategies

1. Urge the Birch Bay Water and Sewer District to continue appropriate planning, engineering and financial studies, leading to the expansion of the wastewater treatment plant.
2. Urge the Birch Bay Water and Sewer District to continue their proactive efforts to look for and secure development rights for additional water supply.
3. Urge the Birch Bay Water and Sewer District to continue efforts to coordinate utility line placement with county road construction and maintenance to minimize disruption to local residents and businesses.

## UTILITIES

4. Urge the Birch Bay Water and Sewer District, Whatcom County Planning Commission and the Whatcom County Council to update and approve water and sewer comprehensive plans that expand water and sewer utility service area boundaries to corresponds to the adopted urban growth area as shown in Figure 10-4.
5. Ask the Whatcom County Public Works Department to prepare a long-range and a short-range action plan to solve many of the current stormwater management problems.
6. Designate the Birch Bay watershed as a “Stormwater Special District” under Whatcom County Code section 20.80.636, Stormwater Special Districts.
7. Include the Birch Bay Watershed as a “water resource special management area” in Whatcom County Code 20.80.735, Water resource special management areas, critical areas and critical area buffers; applying only sections (2) (a), (b), and (c), which address temporary sediment and erosion control, phased clearing and soil stabilization respectively.
8. Pursue efforts to underground utilities along Birch Bay Drive wherever and whenever feasible.
9. Develop Low Impact Development standards for Birch Bay and other sensitive watersheds. Low Impact Development regulations should consider allowance or requirement of narrower streets, limitations on impervious surfaces, tree retention policies, with the goal of retaining or replanting 65% tree cover in sensitive areas, and stormwater management techniques such as rain gardens and bioswales designed to increase stormater retention and infiltration.
10. Work with the County Public Works Department, Birch Bay Water and Sewer District and appropriate agencies and organizations to develop funding sources for storm water management and shellfish protection.
11. Develop special stormwater requirements for land adjacent to eroding bluffs to require water quality treatment and reduced rates of flow through lined facilities with flow discharged off-site.

Figure 10-4  
Proposed Utility Service Area - Year 2020

Figure 10-5  
Birch Bay Watershed

## Chapter 11

# TRANSPORTATION

## Introduction

In 2007 Whatcom County and its consultant, Transpo Group, worked with Birch Bay residents to develop a transportation planning study of the Birch Bay area, including transportation facilities within the Community Plan boundary as well as facilities outside the boundary connecting Birch Bay with I-5 and Blaine. That study, which is attached to the Community Plan as Appendix A, proposes measures intended to ensure the transportation system effectively serves Birch Bay residents into the future. This chapter is based on the policies and projects proposed in the study as a result of public participation and thorough analysis of expected future travel demands.

## Existing Transportation System

### Roadway System and Traffic Controls

The transportation system in and around the Birch Bay area consists of various transportation facilities, including state highways, collector routes, local streets, transit services, and pedestrian and bicycle facilities. This inventory covers the street system, traffic controls, traffic volumes, traffic operations, traffic safety, transit service, and non-motorized facilities (see Figure 11-1).



## State Highways

**Interstate 5 (I-5)** is the north-south interstate freeway serving Washington State. It connects to Canada within the City of Blaine. I-5 is classified as a Highway of Statewide Significance (HSS), meaning that local concurrency programs will not be applied. Within the Birch Bay Subarea, I-5 runs diagonally from the northwest (in Blaine) to the southeast near the City of Ferndale. I-5 has four travel lanes within the study area and a posted speed limit of 70 mph. Interchanges within the study area are located at Grandview Road (SR 548) and Birch Bay-Lynden Road. An interchange also serves the Birch Bay Subarea at exit 274 in the south part of the City of Blaine.

**SR 548** is a state Highway of Regional Significance (HRS) within the Birch Bay Subarea. It is comprised of two segments – Blaine Road and Grandview Road.

**Blaine Road (SR 548)** serves major north-south travel flows between the City of Blaine and the industrial areas south of Grandview Road. At its north end it connects with Interstate 5 at an interchange in the south part of the City of Blaine (exit 274). It has two travel lanes and a posted speed limit of 45 mph. The roadway has several small hills due to the rolling terrain. Its lanes are relatively narrow and there is little or no shoulder area.

**Grandview Road (SR 548)** serves as SR 548 east of Blaine Road. It is an east-west, two-lane roadway which connects the south part of the Birch Bay Urban Growth Area with an interchange with Interstate 5 and with an alternative route to Ferndale and Bellingham via Kickerville Road. The lanes are typically between 10 feet and 12 feet wide, and the posted speed limit is 50 mph.

## County Arterial and Collector Roads

Whatcom County owns and maintains a variety of arterial and collector roads in the Birch Bay area. These roads generally function to provide access between communities, or to connect residential neighborhoods with community centers and facilities. These are two-lane roads, with posted speed limits ranging from 25 to 50 mph.



## Local Access Roads

The remaining routes are local access roads. These streets serve local abutting land uses and neighborhood traffic. They generally have two travel lanes and 25-mph speed limits.

## Traffic Volumes

Daily and PM peak hour traffic volumes were collected from a variety of sources including Whatcom County, Washington State Department of Transportation (WSDOT), and Whatcom Council of Governments (WCOG). These traffic volumes were supplemented with existing PM peak hour turning movement counts conducted for the plan update in 2006 and 2007. The existing PM peak hour volumes are shown in Figure 4.

## Traffic Operations

Traffic operations for an intersection can be described alphabetically with a range of levels of service (LOS). LOS A indicates free-flowing traffic and LOS F indicating extreme congestion and long vehicle delays.

Whatcom County's Comprehensive Plan establishes level of service standards for roadway segments for purposes of transportation concurrency evaluation (See Table 11-1). Under state law, the county cannot approve any development that would generate enough traffic to cause the level of service on county arterials and collectors to fall below the adopted standards.

**Table 11-1 Whatcom County Level of Service Standards (Concurrency)**

Arterial Location	Maximum V/C <sup>1</sup> ratio	Level of Service Standard
Outside Urban Growth Area	0.75	C
Urban Growth Areas not associated with cities (includes Birch Bay UGA)	0.80	C
Urban Growth Areas associated with cities	0.90	D

1. Volume-to-capacity

State highways have a separate standard that is set by WSDOT and the Regional Transportation Planning Organization. Highways of Statewide Significance (HSS) within urban areas, such as sections of I-5, have a LOS

threshold of LOS D. In rural areas, the HSS LOS is set at LOS C. The LOS for Highways of Regional Significance (HRS), such as Blaine Road (SR 548), is set at the LOS adopted by the local metropolitan planning organization (MPO). The MPO for Whatcom County is the Whatcom Council of Governments (WCOG). WCOG and Whatcom County both indicate that the LOS standard for HRS within urban areas is set at LOS D. Outside of urban areas, the HRS LOS standard is LOS C.

Whatcom County establishes similar levels of service for intersection operations, for purposes of traffic impact analyses beyond concurrency evaluations. The Birch Bay Transportation Planning Study uses levels of service based on intersection operations during weekday afternoon peak traffic conditions. The level of service is measured in terms of expected delay at the most congested motion at the intersection. Table 11-2 and Figure 11-3 summarize the existing weekday PM peak hour LOS at study intersections.



# TRANSPORTATION

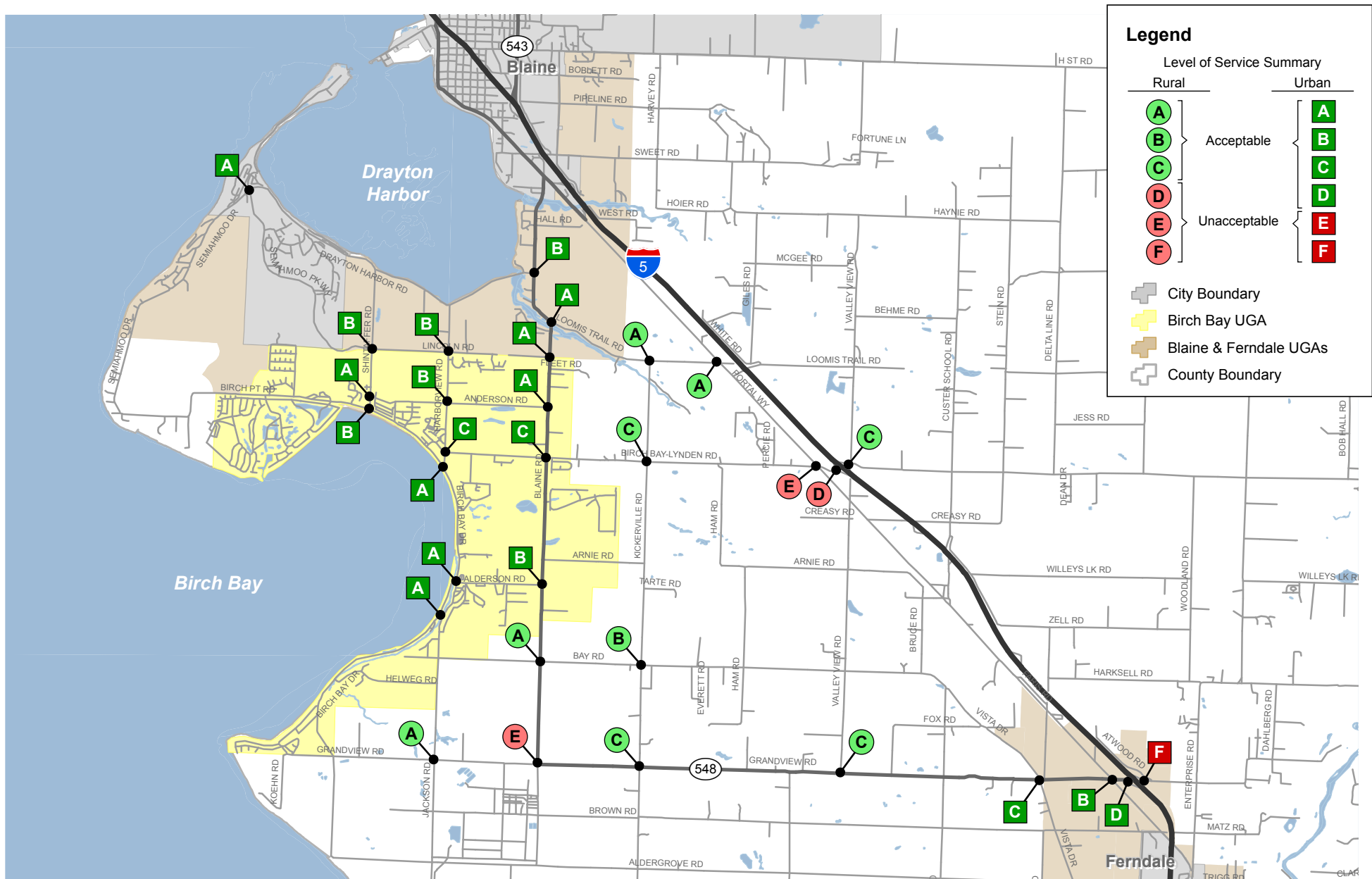
**Table 11-2 2007 Weekday PM Peak Hour Intersection Level of Service**

Intersection	Urban or Rural	Intersection Control <sup>1</sup>	2007		
			LOS <sup>2</sup>	Delay <sup>3</sup>	WM <sup>4</sup>
I-5 NB Ramps / Birch Bay-Lynden Road	Rural	AWSC	C	21.6	-
I-5 SB Ramps / Birch Bay-Lynden Road	Rural	TWSC	D	33.9	SB
I-5 NB Ramps / Grandview Road (SR 548)	Urban	TWSC	F	75.2	NB
I-5 SB Ramps / Grandview Road (SR 548)	Urban	TWSC	D	31.4	SB
Blaine Road (SR 548) / Drayton Harbor Road	Urban	TWSC	B	13.6	EB
Blaine Road (SR 548) / Loomis Trail Road	Urban	TWSC	A	8.6	WB
Blaine Road (SR 548) / Lincoln Road	Urban	TWSC	A	10.0	EB
Blaine Road (SR 548) / Anderson Road	Urban	TWSC	A	9.7	EB
Blaine Road (SR 548) / Birch Bay-Lynden Road	Urban	AWSC	C	19.7	-
Blaine Road (SR 548) / Alderson Road	Urban	TWSC	B	11.2	EB
Blaine Road (SR 548) / Bay Road	Rural	AWSC	A	8.3	-
Blaine Road (SR 548) / Grandview Road (SR 548)	Rural	TWSC	E	38.0	SB
Semiahmoo Parkway / Drayton Harbor Road	Urban	AWSC	A	7.6	-
Shintaffer Road / Semiahmoo Parkway (Lincoln Road)	Urban	TWSC	B	13.1	SB
Shintaffer Road / Anderson Road	Urban	TWSC	A	9.2	WB
Shintaffer Road / Birch Bay Drive	Urban	TWSC	B	10.2	SB
Harborview Road / Lincoln Road	Urban	TWSC	B	12.9	EBL
Harborview Road / Anderson Road	Urban	TWSC	B	11.3	EB
Harborview Road / Birch Bay-Lynden Road	Urban	AWSC	C	16.0	-
Harborview Road / Birch Bay Drive	Urban	AWSC	A	9.2	-
Birch Bay Drive / Alderson Road	Urban	AWSC	A	7.8	-
Birch Bay Drive / Jackson Road	Urban	TWSC	A	9.2	WBL
Jackson Road / Grandview Road	Rural	AWSC	A	7.6	-
Kickerville Road / Loomis Trail Road	Rural	TWSC	A	8.7	NB
Kickerville Road / Birch Bay-Lynden Road	Rural	TWSC	C	17.4	SB
Kickerville Road / Bay Road	Rural	TWSC	B	10.6	NB
Kickerville Road / Grandview Road (SR 548)	Rural	TWSC	C	23.4	NB
Portal Way / Loomis Trail Road	Rural	TWSC	A	8.4	EB

## TRANSPORTATION

Portal Way / Birch Bay-Lynden Road	Rural	AWSC	E	35.4	-
Portal Way / Grandview Road (SR 548)	Urban	Signal	B	13.3	0.54
Vista Drive / Grandview Road (SR 548)	Urban	AWSC	C	19.1	-
Valley View Road / Birch Bay-Lynden Road	Rural	TWSC	B	11.7	SB

1. Signal = Traffic Signal; AWSC = All-Way Stop Control; TWSC = Two-Way Stop Control.
2. Level of service, based on 2000 Highway Capacity Manual methodology. Shaded cells indicate intersections exceeding Whatcom County LOS standard: LOS D in urban locations (within city limits or UGA) & LOS C in rural locations (non-UGA).
3. Average delay in seconds per vehicle.
4. Worst movement reported for unsignalized intersections.



**Figure 11-3**  
 2007 Weekday PM Peak Hour Intersection Level of Service

*Birch Bay Community Plan*

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As shown in Table 11-2, all but four study intersections are currently operating at the respective LOS standard or better during the weekday PM peak hour. The exceptions are:

The location exceeding the urban LOS standard (LOS D):

- I-5 NB Ramps / Grandview Road (SR 548) – operating at LOS F

Locations exceeding the rural LOS standard (LOS C):

- I-5 SB Ramps / Birch Bay Lynden Road – operating at LOS D
- Blaine Road (SR 548) / Grandview Road (SR 548) – operating at LOS E
- Portal Way / Birch Bay-Lynden Road – operating at LOS E

Birch Bay-Lynden Road carries the highest traffic volumes in the area, contributing to the level of service deficiencies observed in existing conditions. The high traffic volumes during peak hours limit the gaps available for side street traffic to turn onto Birch Bay-Lynden Road.

## Transit and Public Transportation

The public transportation agency in the Birch Bay area is Whatcom Transportation Authority (WTA). WTA offers several services for local residents and visitors to make trips throughout the county. Typical fixed route service is available in the Birch Bay area, although its frequencies do not necessarily provide for regular commuting.

The following types of transit service are available in Birch Bay:

- Fixed route service (Routes 55, 70X)
- Dial-a-Ride, or Flex service
- Paratransit

### Fixed Route Service

WTA's fixed route service includes Route 70X, which is an express service between Birch Bay and Bellingham. The route has one stop in the Birch Bay area, at Birch Bay-Lynden Road and I-5 to serve Birch Bay Square. Route 70X makes four round trips per day on weekdays between 6:00 AM and approximately 7:00 PM. Saturday service for Route 70X is provided by Route 55, which is the other fixed route service.

Route 55 serves as a connector route between Blaine, Birch Bay, Ferndale, and the Bellis Fair mall in Bellingham. This route makes three round trips per day, in addition to making “flex” deviations along the route for previously requested stops by individual users. Route 55 runs between 8:40 AM and approximately 4:00 PM on weekdays, and between 8:40 AM and approximately 6:00 PM on Saturdays. See Figure 11-4 for a map of these routes.

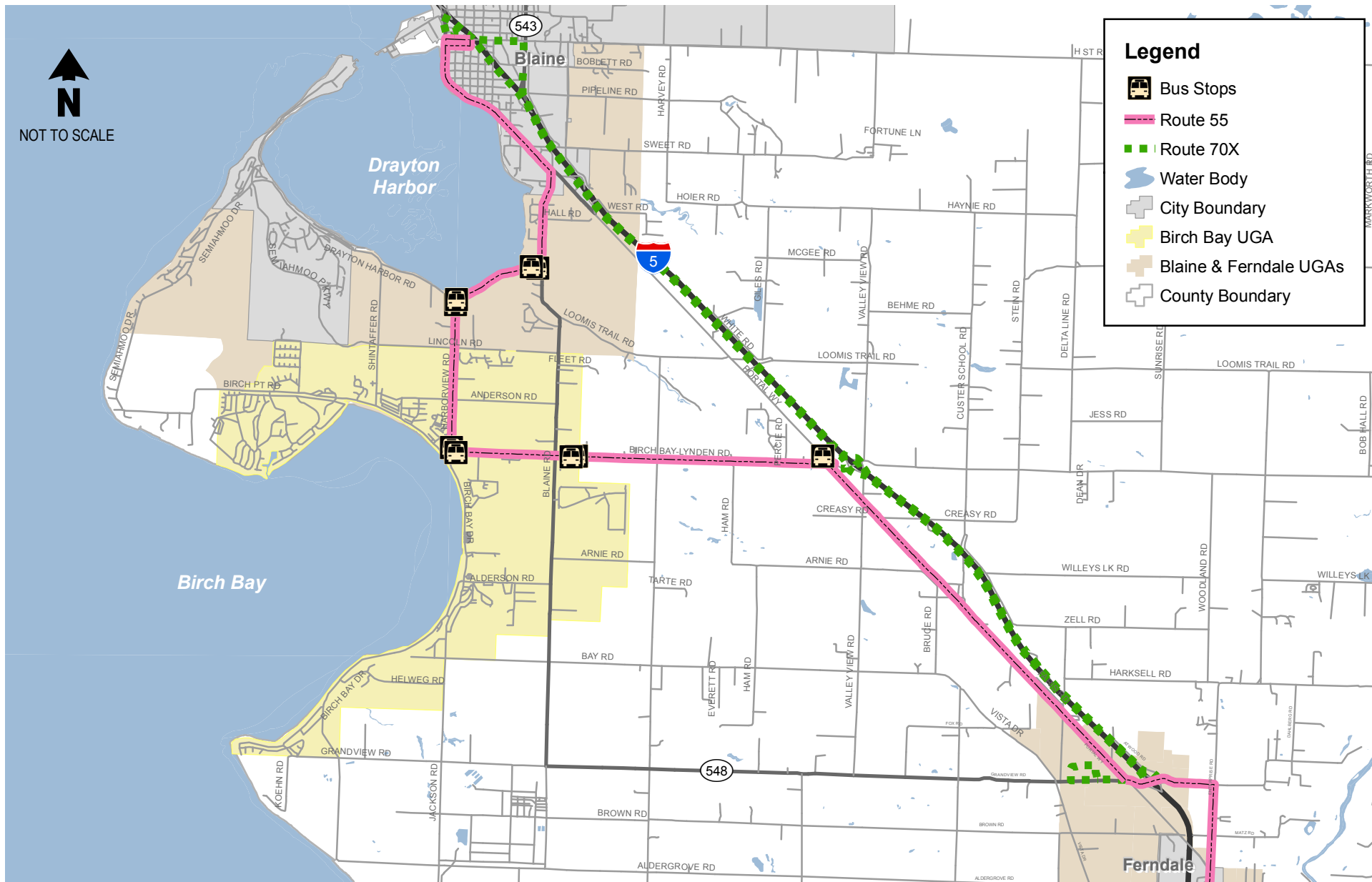
### Dial-a-Ride Service

WTA’s Dial-a-Ride service is provided for users in the Birch Bay and Blaine areas. This service provides local service in the area, and also connects to Route 70X. According to the WTA Six-Year Strategic Service Plan, Dial-a-Ride service during the middle of the day will serve as Route 55, a local service route. When Route 70X is in the area, the Dial-a-Ride service will continue to provide connections to the fixed route service. The average monthly ridership in 2006 for the Dial-a-Ride service was 606 passengers.

### Paratransit Service

WTA’s paratransit service is provided for those users who are not able to use the traditional fixed route services. These users are typically people with disabilities or seniors. The federal Americans with Disabilities Act (ADA) provides standards for paratransit, which includes a policy that passenger capacity constraints are not allowed. WTA strives to meet the demand of all eligible individuals.





**Figure 11-4**  
**Fixed Transit Routes**

*Birch Bay Community Plan*



## Pedestrian and Bicycle Systems

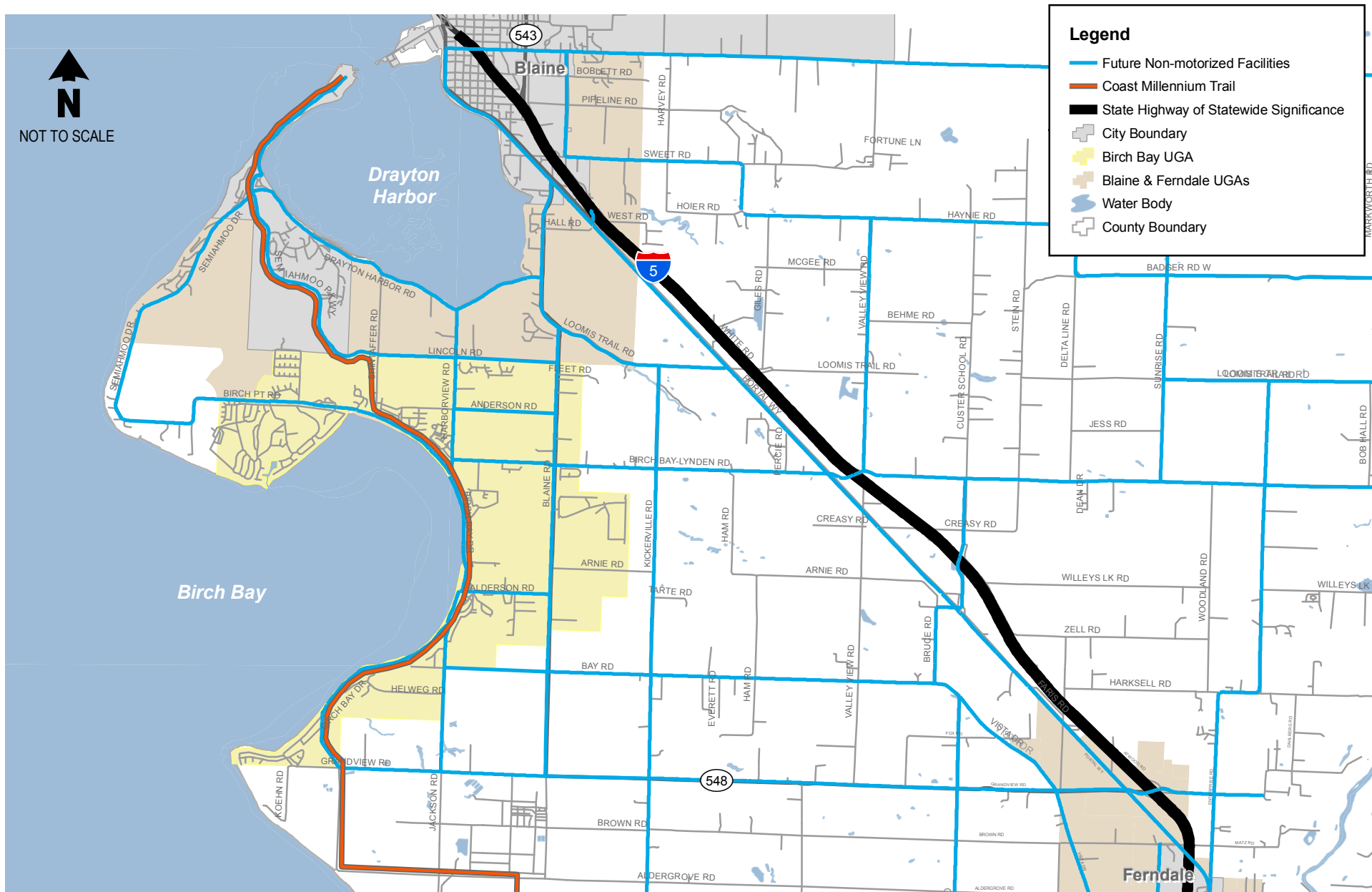
A well connected non-motorized transportation system encourages healthy recreational activities, reduces vehicle travel demand, and enhances safety within the community. The projects included in Table 11-3 include pedestrian and bicycle facilities as part of the identified roadway improvements. In many cases, the proposed improvements include the addition or enhancement of roadway shoulders to accommodate non-motorized transportation within Birch Bay. Included in these projects is the Birch Bay Drive Pedestrian Facility project.

The pedestrian system within Birch Bay is comprised of sidewalks, walkways, trails, and roadway shoulders. Within the UGAs, the County desires to have roadways improved to urban standards, which could include sidewalks or other types of pedestrian walkway facilities. Pedestrian facilities should be located along streets that provide access and connectivity to the commercial businesses, residential areas, parks, schools, public buildings, and transit stops within the Birch Bay UGA. Enhanced roadway shoulders outside the UGA will improve safety for pedestrian travel in those areas.

Within Birch Bay, the bicycle system is comprised of mostly roadways. Many of the roadways within the study area have deficient roadway shoulders or are without shoulders altogether. The major improvements for bicycle travel will be the addition or enhancement of roadway shoulders. An important component of the bicycle system is completion of the Coast Millennium Trail through Birch Bay, providing a bicycling link from the Canadian border to Bellingham and farther south. A portion of the trail has been completed south of Semiahmoo Parkway.

There are several proposed non-motorized facilities throughout the County, a few of which are in the Birch Bay study area. Proposed non-motorized facilities in the study area include:

- Bicycle lane along Semiahmoo Parkway
- Off-road trail that would connect to a bicycle lane along Birch Bay Drive
- Off-road trail to continue south of the Birch Bay Drive bicycle lane
- Bicycle lane along Birch Bay-Lynden Road
- Bicycle lane along Portal Way
- Portion of the Coast Millennium Trail that begins near Alderson Road and Birch Bay Drive and continues south toward Ferndale
- Bicycle lane along Birch Bay Drive



**Figure 11-5**  
**Birch Bay Study Area Non-motorized Transportation System Plan**

*Birch Bay Community Plan*

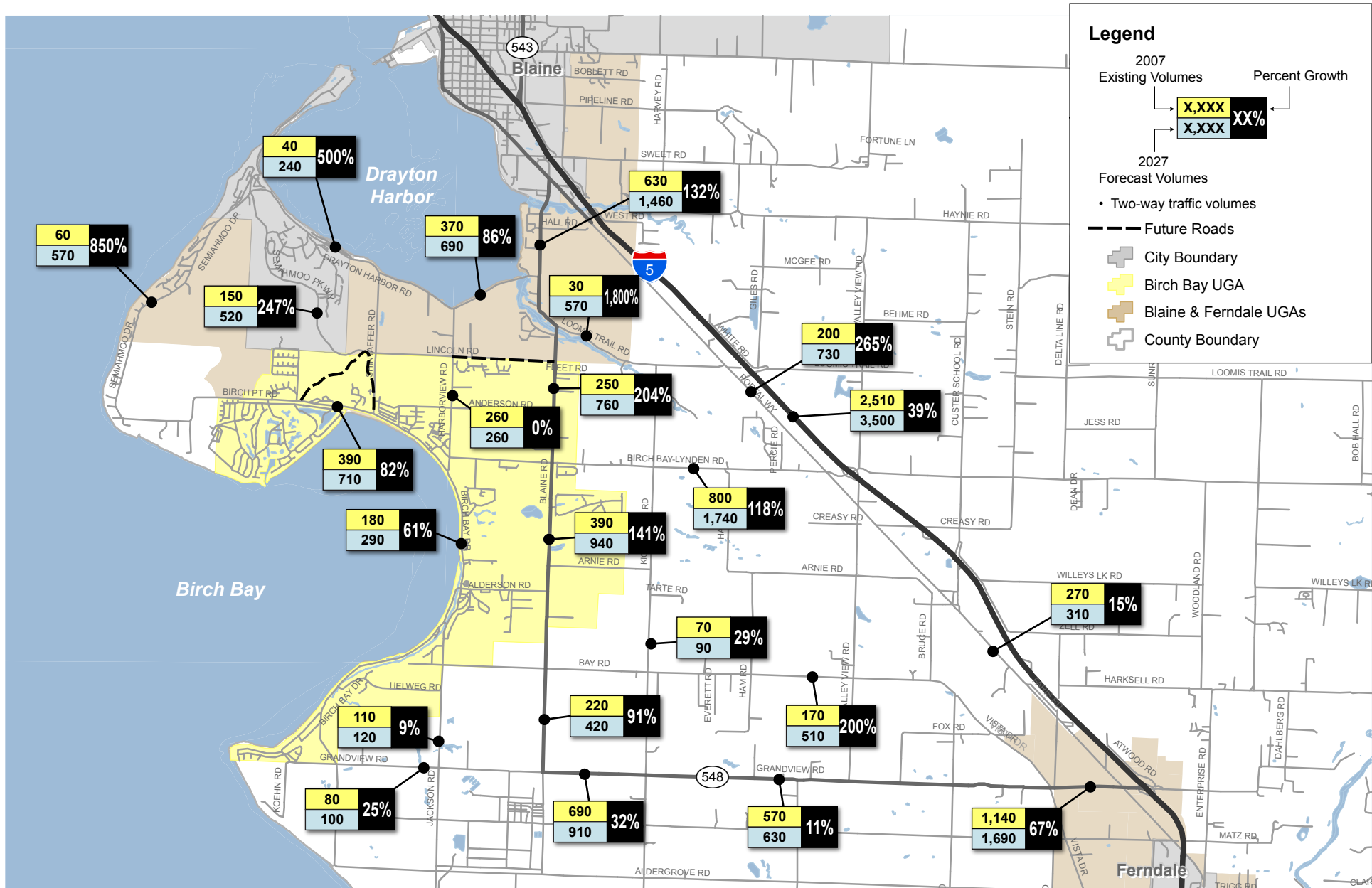
M:\06\06229 Whatcom County Concurrency Management\GIS\Figures\BB\_Community\_Plan\FIG 11-5 NM Sys Plan.mxd



## Travel Forecasts

The Birch Bay Transportation Planning Study used the Whatcom Council of Governments' regional travel demand model and the population and employment figures from this Community Plan to predict vehicular travel patterns in 2027. The study analyzed and compared alternatives with and without the capacity improvements proposed in the study.

The analysis indicated that the most critical areas for congestion in the future would be along Birch Bay-Lynden Road between I-5 interchange and Harborview Road and along Grandview Road (SR 548) between the I-5 interchange and Vista Drive. It was found that improving traffic operations at these locations consequently reduces the traffic using the I-5/south Blaine interchange (exit 274), thus resolving capacity issues along Blaine Road (SR 548) and Drayton Harbor Road that would be expected without these improvements.



**Figure 11-6**  
2007 and 2027 PM Peak Hour Traffic Volumes  
*Birch Bay Community Plan*

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## Transportation Vision, Goals and Policies

### Vision Statement

*East-west traffic movement between Birch Bay and I-5, that has been a problem for years, has improved significantly. Birch Bay - Lynden Road and Grandview Road, have been widened by providing adequate shoulders and center left-turn lanes. Blaine Road also functions as a north-south collector/distributor road taking the traffic load off Birch Bay Drive, leaving it for local access traffic and for bicycles and pedestrians. A number of pay parking lots have appeared east of Birch Bay Drive, camouflaged and tucked away behind commercial facilities with their storefronts facing Birch Bay Drive. Bus service has improved considerably, enabling workers to travel to out-of-the-area job locations in Semiahmoo, Blaine, BP and Bellingham. Pedestrian and bicycle trails have become an integral part of all major road improvements. For example, along the trail, bicyclists can now travel, in their own right-of-way from the Canadian border to Bellingham and further south. Birch Bay Drive, which used to function as a north-south arterial road, now has resemblance to a beach-front promenade, integrating the people oriented development on the east side of the Drive with the water oriented activities on the west side*

### Goals and Policies

#### Public Participation

- A. Encourage and solicit public participation in all transportation-related decisions to help ensure that planning and implementation have public support.
- B. Provide programs and forums to help the public and stakeholders understand transportation issues, requirements, planning concepts, and funding programs.

#### 1. Agency Coordination

- A. Encourage interlocal agreements with Washington State Department of Transportation (WSDOT) and local agencies to coordinate development review programs and mitigation.
- B. Coordinate with Washington State Department of Transportation (WSDOT) to improve interchange intersections and other key intersections.

- C. Coordinate updates to the Birch Bay Community Plan's transportation chapter with the State Highway Systems Plan (Washington State Department of Transportation (WSDOT)), Whatcom Transportation Plan (Whatcom Council of Governments (WCOG)), City of Blaine, and the Whatcom Transit Authority (WTA).

### **2. Land Use, Development Review, and Standards**

- A. Review County land use policies and implementing regulations, standards, and incentives to insure they support, encourage, and maximize alternative transportation modes such as bicycling, walking, transit, and transportation demand programs.
- B. Require development of circulation roads within the Birch Bay UGA commercial area.
- C. For purposes of transportation concurrency evaluation, maintain a level of service (LOS) C or better (volume / capacity ratio of 0.80 or less) on road segments within the Birch Bay UGA and LOS C or better (0.75 or less) on road segments outside the UGA.
- D. Convert roadways within the designated UGAs from rural standards to urban standards while being sensitive to the character of the area.
- E. Roadway standards should include context sensitive design elements to be flexible with the character and topography of the area (separated pathways in lieu of sidewalks where appropriate).

### **3. Streets and Highways**

- A. Maintain a level of service (LOS) C or better for intersections outside the UGA and LOS D for state highway intersections and intersections within UGA boundaries.
- B. Set a reduced year-round speed limit on Birch Bay Drive of 20 or 25 miles per hour.
- C. Require urban street standards on roadways serving urban development within UGA boundaries.
- D. Discourage commuter through traffic on Birch Bay Drive.
- E. Provide safer and more efficient travel to Birch Bay-Lynden Road, City of Blaine, City of Ferndale, and I-5.

## **4. Pedestrians and Bicycles**

- A. Improve non-motorized connections to other local and regional destinations.
- B. Provide streets and arterials that maximize pedestrian and bicycle use.
- C. Whenever possible, separate vehicle traffic from pedestrian and bicycle modes.
- D. Design and construct arterials and collector roadways to support safe use by pedestrians and bicyclists.
- E. Ensure that new non-motorized facilities meet Americans with Disabilities Act (ADA) requirements.

## **5. Public Transportation and Transportation Demand Management**

- A. Commit to alternative transportation by working closely with WTA and major employers to establish park & ride lots and implement van pools and car pools.
- B. Encourage enhanced service/frequency to the Birch Bay subarea

## **6. Environmental Considerations**

- A. Require road standards that reduce the amount of impervious surface and that treat stormwater on site with appropriate low impact development techniques while providing for safe and efficient operations of the transportation facilities
- B. Encourage flexible road design standards that encourage native vegetation retention.
- C. Encourage consistency with open space corridor plans (such as the Birch Bay Watershed Management Plan), shoreline master program, salmon recovery plans, and critical areas regulations to reduce impacts to fish and wildlife.

## **7. Program Financing and Implementation**

- A. Tie transportation funding priority to concurrency and facility adequacy.
- B. Continue to partner with Washington State Department of Transportation (WSDOT), Whatcom Council of Governments (WCOG), and Whatcom



Transit Authority (WTA), and other local agencies to fund improvement projects and programs that serve the Birch Bay subarea.

## Transportation Systems Plan

The transportation systems plan proposed in the Birch Bay Transportation Planning Study provides a long-range strategy for the Birch Bay UGA to address current and forecast transportation issues and needs. Transportation system improvements are required to accommodate the projected growth in population and employment within the Birch Bay UGA. The transportation systems plan is based upon analyses of the existing transportation system, forecasts of future travel demands, anticipated availability of funding resources, and the desire of the Birch Bay community to create an efficient transportation system that puts a priority on community livability. The Plan builds on the countywide policies and standards, while shaping transportation goals and vision for the Birch Bay subarea.

The transportation systems plan primarily focuses on streets and highway improvements because they serve most of the travel needs for the subarea. The streets and highways serve general traffic, freight, transit, ridesharing, pedestrians, and bicyclists. Therefore, the Plan also provides the framework for other travel modes in the community, including pedestrian, bicycle, and transit modes.

## Transportation Improvement Projects

Based on an evaluation of existing and forecast traffic volumes, traffic operations, safety, and circulation needs, a recommended list of transportation improvement projects and programs were defined. The project list is organized into the following categories:

- Intersection Projects
- New Roadway and Major Widening or Reconstruction Projects
- Minor Widening and Reconstruction Projects
- State Route Projects
- Other Mode

Figure 11-7 and Table 11-3 identify each of the projects and shows where the projects are located. Table 11-3 also provides a brief description of each project including the project limits. The table identifies projects that are currently part of the County's Transportation Improvement Program (TIP). This highlights the projects that are currently identified for planning,

design, or construction. A project identification number is provided for each project that is referenced in Figure 11-7.

Planning level cost estimates are also included for each project. The cost estimates were prepared based on typical per unit costs, functional classification, and level of improvement. The cost estimates include allowances for right-of-way acquisition based on generalized needs to meet the County's adopted roadway standards. Estimated costs for several improvements on state routes were developed jointly with Washington State Department of Transportation (WSDOT).

A relative priority (high, medium, and low) was established for each project. The priority reflects the relative need for the projects to enhance the Birch Bay subarea transportation system and provides guidance in implementing the respective improvements.

**State Route Projects.** I-5 provides the primary regional connection to the Birch Bay subarea. To the north, I-5 connects the Birch Bay subarea to the U.S./Canada border. To the south, I-5 connects to Bellingham and the central Puget Sound region. SR 548 also provides for regional travel from the Birch Bay subarea to I-5 from the north and east. The Washington State Highways Systems Plan (HSP) is the element of Washington's Transportation Plan that addresses the states highway system. The 2007-2026 HSP does not identify specific improvements within the Birch Bay subarea. The HSP calls for a Interstate Master Plan that would identify improvements to optimize capacity and safety on the interstate highway system.

**Table 11-3 Birch Bay Community Plan Transportation Improvement Projects and Programs**

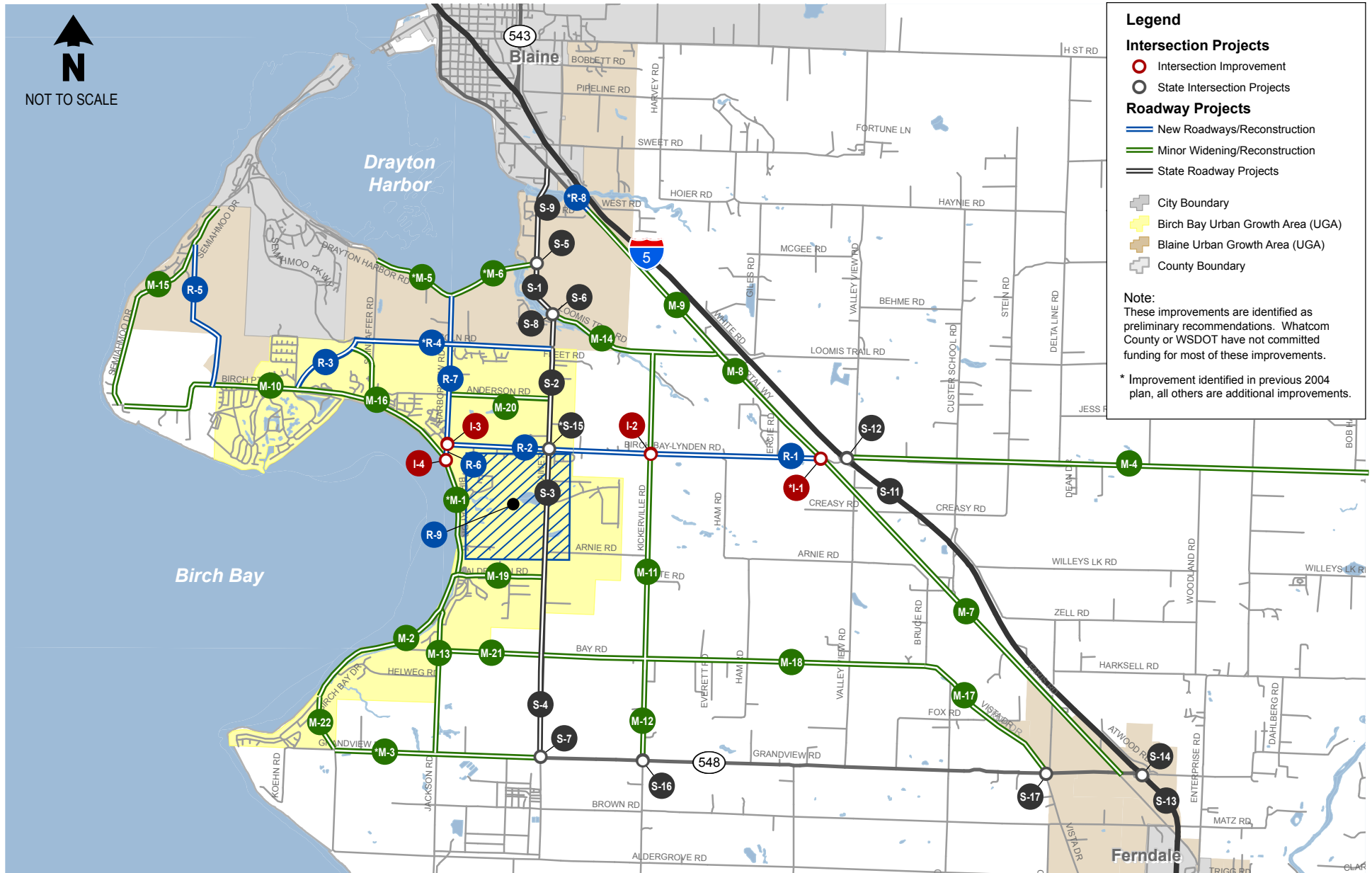
Project Group	Project ID	Project Name	Project Limits	Project Description	In Existing TIP? <sup>(1)</sup>	TIF Eligible?	Total Project Cost (\$1,000s) Estimated <sup>(2)</sup>	Relative Priority	Project Justification				Comments
									Capacity	Safety	Road Standards & Preservation	Area Circulation	
INTERSECTIONS PROJECTS	I-1	Birch Bay- Lynden Road / Portal Way	Intersection	Construct intersection improvements to include turn lanes and install traffic signal when warranted.	Yes	Yes	\$3,000	High	X	X			In design, construction programmed for 2009.
	I-2	Birch Bay-Lynden Road / Kickerville Road	Intersection	Construct intersection improvements to include roundabout or install turn lanes and traffic signal, when warranted.	No	Yes	\$3,000	Medium	X	X			Turn lanes could be constructed on Birch Bay-Lynden Road as part of R-1.
	I-3	Birch Bay-Lynden Road / Harborview Road	Intersection	Construct intersection improvements to include turn lanes and install traffic signal when warranted.	No	Yes	\$3,000	High	X	X			
	I-4	Birch Bay Drive / Harborview Road	Intersection	Improve/ redesign the intersection with turn lanes, and install traffic signal when warranted.	No	Yes	\$3,000	High	X	X			
NEW ROADWAYS AND MAJOR WIDENING OR RECONSTRUCTION PROJECTS	R-1	Birch Bay-Lynden Road Widening	Portal Way to UGA limit just east of Blaine Road	Widen to rural major collector standards including turn lanes at major access locations and paved shoulders for non-motorized trips.	No	Yes	\$1,500	High	X	X	X		Also see project I-2.
	R-2	Birch Bay-Lynden Road Widening	UGA limit just east of Blaine Road to Harborview	Widen to urban principal arterial standards including turn lanes and non-motorized facilities.	No	Yes	\$1,800	High	X	X	X		Also see projects I-3 and I-4.
	R-3	Birch Point Connector Road	Birch Point Road to Shintaffer Road	Construct new 2-lane connection at urban standards including non-motorized facilities and new intersection with Semiahmoo Drive.	No	No	\$2,000	High	X			X	A section of the project is constructed by the developer.
	R-4	Lincoln Road Extension and Improvement	Shintaffer Road to Blaine Road (SR 548)	Reconstruct existing road and construct 2-lane urban arterial to Blaine Road with non-motorized enhancement including construction of roundabouts at intersections with Blaine Road and Harborview Road.	Yes	Yes	\$9,000	High	X			X	In design, construction programmed for 2011.
	R-5	West Blaine UGA Connector Road	Birch Point Road to Semiahmoo Drive	Construct new 2-lane road to urban standards between Birch Point Road and Semiahmoo Drive to serve future urban development.	No	No	\$4,800	Low				X	Blaine UGA. Would be constructed by development projects. Alignment would be defined as part of future development projects.
	R-6	Harborview Road	Birch Bay Drive to Birch Bay-Lynden Road	Improve roadway to urban principal arterial standards including non-motorized facilities.	No	Yes	\$200	High		X	X		
	R-7	Harborview Road	Birch Bay-Lynden Road to Drayton Harbor Road	Improve roadway to major collector standards including non-motorized facilities.	No	Yes	\$1,000	Low			X		
	R-8	Portal Way/Dakota Creek Bridge #500	Bridge	Bridge replacement or rehabilitate structure	Yes	Yes	\$5,000	Medium		X	X		
	R-9	Commercial area circulation roads	West of Blaine Road (SR 548).	Local circulation urban road(s) as part of future development.	No	No	\$6,000	Medium	X			X	To be built by development projects with potential future Birch Bay Town Center.

Project Group	Project ID	Project Name	Project Limits	Project Description	In Existing TIP? <sup>(1)</sup>	TIF Eligible?	Total Project Cost (\$1,000s) Estimated <sup>(2)</sup>	Relative Priority	Project Justification				Comments
									Capacity	Safety	Road Standards & Preservation	Area Circulation	
MINOR WIDENING AND RECONSTRUCTION PROJECTS	M-1	Birch Bay Drive	Alderson Road to Shintaffer Road	Improve roadway to urban minor arterial standards including non-motorized facilities.	Yes	Yes	\$5,000	High		X (urban)	X		
	M-2	Birch Bay Drive	Alderson Road to Point Whitehorn Road	Improve to urban minor arterial standards including non-motorized facilities.	No	Yes	\$1,800	Medium		X (urban)	X		
	M-3	Grandview Road	Point Whitehorn Road to Blaine Road	Improve to rural collector road standards with paved shoulders for non-motorized travel.	Yes	No	\$3,000	Low			X		
	M-4	Birch Bay-Lynden Road	I-5 to Guide Meridian Road	Improve to rural major collector standards including paved shoulders for non-motorized travel.	No	No	\$5,000	Medium			X		Supports Birch Bay Subarea Transportation Plan with non-motorized connection to/from Lynden.
	M-5	Drayton Harbor Road	Harborview Road to Shintaffer Road	Reconstruct, repair road slope and pavement and upgrade roadway.	Yes	No	\$1,800	Medium			X		Within Blaine Urban Growth Area. Environmental constraints will affect design standard.
	M-6	Drayton Harbor Road	Harborview Road to Blaine Road	Improve to rural collector standards with shoulders for non-motorized travel.	Yes	Yes	\$1,800	Medium		X (urban)			Within Blaine Urban Growth Area.
	M-7	Portal Way	Grandview Road to Birch Bay- Lynden Road	Reconstruct to major collector standards including paved shoulders for non-motorized travel.	No	No	\$3,000	Low			X		If pavement is low than Whatcom County usually has a major reconstruction.
	M-8	Portal Way	Birch Bay- Lynden Road to Loomis Trail Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	Yes	\$1,200	Medium	X				
	M-9	Portal Way	Loomis Trail Road to Blaine city limit	Reconstruct to major collector standards including paved shoulders for non-motorized travel.	No	No	\$1,800	Low			X		
	M-10	Birch Point Road	Semiahmoo Drive to Shintaffer Road	Reconstruct to urban minor arterial standards including non-motorized facilities	No	Yes	\$3,000	Low		X (urban)	X		
	M-11	Kickerville Road	Loomis Trail Road to Bay Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	No	\$2,400	Low			X		
	M-12	Kickerville Road	Bay Road to Grandview Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	No	\$650	Low			X		
	M-13	Jackson Road	Birch Bay Drive to Grandview Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	Yes	\$1,200	Low			X		
	M-14	Loomis Trail Road	Blaine Road to Portal Way	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	Yes	\$1,200	High	X		X		
	M-15	Semiahmoo Drive	Blaine city limits to Birch Point Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	Yes	\$2,000	Low			X		Within Blaine Urban Growth Area.
	M-16	Shintaffer Road	Lincoln Road to Birch Point Road	Reconstruct to urban collector standards including paved shoulders for non-motorized travel.	No	Yes	\$600	Low			X		
	M-17	Vista Drive	Bay Road to Grandview Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	Yes	\$1,500	Medium	X		X		
	M-18	Bay Road	Blaine Road to Vista Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	Yes	\$2,600	Medium	X		X		
	M-19	Alderson Road	Birch Bay Drive to Blaine Road	Reconstruct to urban collector standards including paved shoulders for non-motorized travel.	No	Yes	\$600	Medium		X (urban)	X		
	M-20	Anderson Road	Harborview Road to Blaine Road	Reconstruct to urban standards including paved shoulders for non-motorized travel.	No	No	\$750	Low		X (urban)			
	M-21	Bay Road	Jackson Road to Blaine Road	Reconstruct to urban standards including paved shoulders for non-motorized travel.	No	No	\$750	Low		X (urban)			
	M-22	Point Whitehorn Road	Birch Bay Drive to Grandview Road	Reconstruct to urban standards including paved shoulders for non-motorized travel.	No	No	\$400	Low		X (urban)			

Project Group	Project ID	Project Name	Project Limits	Project Description	In Existing TIP? <sup>(1)</sup>	TIF Eligible?	Total Project Cost (\$1,000s) Estimated <sup>(2)</sup>	Relative Priority	Project Justification				Comments
									Capacity	Safety	Road Standards & Preservation	Area Circulation	
STATE ROUTE PROJECTS	S-1	Blaine Road (SR 548)	Peace Portal Drive to Lincoln Road	Reconstruct and widen to add turn lanes and shoulders/non-motorized facilities at standards (WSDOT standards).	No	No	\$6,000	High	X	X (urban)	X		Within Blaine Urban Growth Area.
	S-2	Blaine Road (SR 548)	Lincoln Road to Birch Bay-Lynden Road	Reconstruct and widen to add turn lanes and shoulders/non-motorized facilities at standards (WSDOT standards).	No	No	\$5,000	High	X	X (urban)	X		Continuation of Project S-1.
	S-3	Blaine Road (SR 548)	Birch Bay-Lynden Road to Bay Road	Reconstruct and widen to add turn lanes and non-motorized facilities to meet standards (WSDOT standards).	No	No	\$7,000	Medium	X	X (urban)	X		Continuation of Project S-2.
	S-4	Blaine Road (SR 548)	Bay Road to Grandview Road	Reconstruct to standards (WSDOT standards)	No	No	\$4,000	Medium		X	X		Continuation of Project S-3. Culvert completed for \$2.5M.
	S-5	Blaine Road (SR 548) / Drayton Harbor Road	Intersection	Improve/redesign the intersection with turn lanes and install traffic signal when warranted.	No	No	\$2,000	High	X	X			Within Blaine Urban Growth Area. Overlay project programmed by WSDOT.
	S-6	Blaine Road (SR 548) / Loomis Trail Road	Intersection	Improve/redesign the intersection with turn lanes and install traffic signal when warranted.	No	No	\$2,000	Medium	X	X			
	S-7	Blaine Road (SR 548) / Grandview Road	Intersection	Improve/ redesign the intersection , and install traffic signal with turn lanes when warranted or a roundabout facility	No	No	\$2,000	High	X	X			Developer funded.
	S-8	Blaine Road (SR 548) / California Creek Bridge Replacement	Bridge	Bridge replacement or rehabilitate structure	No	No	\$6,500	Medium			X		Within Blaine Urban Growth Area.
	S-9	Blaine Road (SR 548) / Dakota Creek Bridge Replacement	Bridge	Bridge replacement or rehabilitate structure	No	No	\$13,000	Medium			X		Within City of Blaine (fully WSDOT funded).
	S-11	On and Off ramps of I-5 / Birch Bay-Lynden Road Interchange	Interchange ramps	Improve/ redesign the ramps intersection with turn lanes and install traffic signal when warranted	No	No	\$3,400	High	X	X			
	S-12	I-5 / Birch Bay-Lynden Road Interchange	Interchange	Major reconstruction of interchange at Birch Bay-Lynden Road	No	No	N/A	Medium	X				
	S-13	I-5 / Grandview Rd Interchange	Interchange ramps	Improve/ redesign the ramps intersection with turn lanes and install traffic signal, when warranted	No	No	\$3,500	Medium	X	X			
	S-14	I-5 / Grandview Road Interchange	Interchange	Reconstruction of interchange at Grandview Road	No	No	N/A	Medium	X				Potential long-term project to widen Grandview Road to add travel lanes to reduce queuing impacts.
	S-15	Birch Bay- Lynden Road / Blaine Road (SR 548)	Intersection	Construct intersection improvements to include roundabout or install turn lanes and traffic signal, when warranted.	Yes	No	\$3,000	High	X	X			Potential Whatcom County funding.
	S-16	Grandview Road (SR 548) / Kickerville Road	Intersection	Construct intersection improvements to include roundabout or install turn lanes and traffic signal, when warranted.	No	No	\$3,000	Medium	X	X			Potential Whatcom County funding.
	S-17	Grandview Road (SR 548) / Vista Drive	Intersection	Construct intersection improvements to include roundabout or install turn lanes and traffic signal, when warranted.	No	No	\$3,000	High	X	X			
OTHER MODE	O-1	Park & Ride Facility	Birch Bay Town Center vicinity	Construct new park & ride lot ( or 2 smaller lots) with defined parking stalls capacity to serve Birch Bay, Semiahmoo, and Blaine.	No	No	N/A	Medium	X			X	Whatcom Transit Authority lead. Carry out location and demand study prior to density becomes high. Could be along Harborview Birch Bay-Lynden corridor.
	O-2	Increase Transit Service	Countywide	Increase transit service between Birch Bay and Blaine, Ferndale, and Bellingham.	No	No	N/A	Medium	X			X	Whatcom Transit Authority lead.

**Notes:**

- (1) Project is identified in County's current Transportation Improvement Program or is funded as part of State's Transportation Plan  
(2) Represents planning level project cost estimates. Project costs will be refined during the project design phase.



**Figure 11-7**  
Birch Bay Study Area Transportation Improvement Projects

Birch Bay Community Plan

The  
**Transpo**  
Group

## TRANSPORTATION

Improvements to the I-5/Birch Bay-Lynden Road interchange (projects S-11, S-12) are identified in the Plan as high and medium priorities respectively. Improvements to this interchange have been identified to meet near and long term needs. Project S-11 will improve operations in the near term by redesigning the ramp intersections with turn lanes and installing a traffic signal, when future traffic volumes warrant. Project S-12 will provide a complete reconstruction of the interchange.

Improvements to the I-5/Grandview interchange (projects S-13, S-14) are also identified for the near and long term needs. Similar to project S-11, project S-13 is a high priority and is identified to improve operations at the ramp intersections by adding turn lanes and installing a traffic signal when future traffic volumes warrant. Project S-14 is a medium priority and will provide a complete interchange reconstruction to meet long-range forecast needs.

Blaine Road (SR 548) – Improvements are identified for Blaine Road both north and south of Birch Bay-Lynden Road. North of Birch Bay-Lynden Road, the Plan calls for reconstructing Blaine Road, from I-5 to Birch Bay-Lynden Road (projects S-1, S-2). The improvement projects would add shoulders for non-motorized travel. Intersection improvements are identified at Drayton Harbor Road and Loomis Trail Road (projects S-5, S-6). These improvements include adding turn lanes and traffic signals or roundabouts when future traffic volumes warrant. The Plan also identifies the replacement of two bridges in this corridor, the California Creek bridge and the Dakota Creek bridge (projects S-8, S-9).

South of Birch Bay-Lynden Road, the Plan identifies reconstructing Blaine Road from Birch Bay-Lynden Road to Grandview Road (projects S-3, S-4). The section of Blaine Road north of Bay Road is within the Urban Growth Area for Birch Bay and as such would be reconstructed to WSDOT's standards, adding shoulders for non-motorized travel. South of Bay Road, Blaine Road should be constructed per WSDOT's rural collector standards. Intersection improvements at Birch Bay-Lynden Road and Grandview Road are also identified in the Plan (projects S-15, S-7). A potential roundabout at the Blaine Road (SR 548)/Grandview Road (SR 548) intersection is currently being discussed by WSDOT as part of a developer funded improvement. Though the transportation planning study does not identify the intersection of Blaine Road and Alderson Road as falling below LOS standards within the study period, planned intensive land uses at that intersection may require intersection improvements as mitigation under SEPA at the time of development.

Grandview Road (SR 548) – Two intersection improvements, in addition to those identified at the I-5 interchange and at Blaine Road (SR 548), are identified in the Plan. Improvements to the intersections of Grandview Road (SR 548) at Kickerville Road and at Vista Drive include the installation of turn lanes and roundabout or traffic signal when future traffic volumes warrant. The improvement at Vista Drive/Grandview Road (SR 548) is a high priority because it serves traffic to/from the Birch Bay UGA to I-5 via Bay Road.

However, the HSP does identify I-5 from Grandview Road to the City of Blaine as a “solution that requires further analysis” as the existing capacity will not be sufficient for future traffic volumes.

Intersection Projects. Improvements to intersections along County maintained arterials serving the Birch Bay subarea are needed to resolve existing and future deficiencies, primarily along Birch Bay-Lynden Road. This roadway serves as the main east-west arterial, connecting the Birch Bay subarea to I-5 and the rest of the region. Intersection improvements along this corridor will improve safety and operations by adding turn lanes at key locations and installing traffic signals or roundabouts when future traffic volumes warrant. The Plan identifies three high priority intersection improvements at Birch Bay-Lynden Road at Portal Way, Birch Bay-Lynden Road at Harborview Road, and Birch Bay Drive at Harborview Road.

***New Roadways and Major Widening or Reconstruction Projects.*** Several new roadways and major widening projects are identified in the Plan to address existing deficiencies and support future growth. This category of projects includes upgrading and major widening of roadways to County standards to provide turn lanes at major access locations. Improvements to non-motorized facilities, such as roadway shoulders, are also identified.

Birch Bay-Lynden Road Widening – Birch Bay-Lynden Road serves as the primary east-west arterial, connecting Birch Bay to I-5. In addition to the intersection improvements identified above, the Plan calls for widening the roadway to meet rural major collector standards from Portal Way to the UGA boundary just east of Blaine Road (SR 548) and to urban principal arterial standards west to Harborview Road. These projects would improve facilities for non-motorized travel by paving roadway shoulders and/or adding sidewalks or separated pathways. In addition, the project would include widening to accommodate turn lanes at major access locations. This will allow safer and easier access for left turning vehicles along Birch Bay-Lynden Road.



## TRANSPORTATION

Lincoln Road Extension and Improvement – To complete an alternative east-west corridor north of Birch-Bay Lynden Road, an extension of Lincoln Road between Harborview Road and Blaine Road (SR 548) is planned. In addition to extending the roadway, the project will improve Lincoln Road from Shintaffer Road to Blaine Road (SR 548) to urban minor arterial standards, including construction of two roundabouts at Harborview Road and Blaine Road. The project also includes a separated pathway for non-motorized travel.

Birch Point Connector Road – A new connection between Birch Bay Drive and Lincoln Road is also a key new collector route serving the northern part of the Birch Bay UGA. When fully constructed, this new roadway will provide improved mobility and an alternative to Birch Bay Drive for east-west traffic to/from the residential growth anticipated in the Birch Bay and Blaine UGAs. The project includes realigning the segment of Shintaffer Road south of Lincoln Road, and constructing a new intersection at Lincoln Road. Part of the road would be funded and constructed by a developer. The remaining section will be a County project.

Harborview Road – Improvements are identified for Harborview Road from Birch Bay Drive to Drayton Harbor Road. The section of Harborview Road from Birch Bay Drive to Birch Bay-Lynden Road would be improved to reflect the existing and future demands of Birch Bay traffic traveling to I-5 via Birch Bay-Lynden Road. The section of Harborview Road from Birch Bay-Lynden Road to Drayton Harbor Road would be improved to urban collector standards. Both of these projects would include improved facilities for non-motorized travel.

**Commercial Area Circulation Roads.** In addition to specific improvements identified above, the Plan calls for construction of new circulation roads within the planned Birch Bay UGA commercial area between Birch Bay-Lynden Road and Alderson Road. These new roadways would provide improved access and circulations to future development anticipated for this area, as well as help maintain safety and operations of adjacent arterials, collectors, and state highways.

**Minor Widening and Reconstruction Projects.** Improvements are also needed on other roadways serving the Birch Bay subarea. This category of projects includes minor widening of roadways to add shoulders and improve non-motorized facilities.

Birch Bay Drive – With its proximity to the waterfront, Birch Bay Drive serves as a primary non-motorized route within the Birch Bay UGA.

## TRANSPORTATION

The Birch Bay Drive Pedestrian Facility, part of the Birch Bay Shoreline Enhancement Project, is designed and identified in the county's six-year Transportation Improvement Program. This project would improve the Birch Bay Drive roadway and provide separate facilities for pedestrians and bicyclists. The 2000 Birch Bay Economic Development Action Plan emphasized the need for improved pedestrian and bicycle facilities along Birch Bay Drive as part of the community's economic development strategy. A year round speed limit of 20 to 25 mph is recommended. Specific changes to speed limit should be considered with community input.

Loomis Trail Road – Loomis Trail Road serves as an east-west connector between Portal Way and Blaine Road, northeast of the Birch Bay UGA. The Plan identifies improvements to reconstruct Loomis Trail Road to rural major collector standards. The project includes paved shoulders for non-motorized users.

**Maintenance and Operations Programs.** A systematic program for maintaining the existing and future transportation infrastructure is critical to a safe and efficient transportation system. Elements of a maintenance and operations program for the Birch Bay subarea should include a systematic evaluation of pavement conditions on arterial and local roadways, signage, sight distance (such as vegetation blocking sight lines), and impacts of parking on safety and operations. Other elements should include regular monitoring and servicing of traffic control devices, such as traffic signals and flashing beacons.

In addition, the maintenance and operations program should include a periodic evaluation of speed limits on facilities based on functional classification, design, and current roadway conditions. The speed evaluation should consider elements such as geometric design, actual travel speeds, intersection control, traffic safety, and possible impacts on adjacent corridors or neighborhood streets.

## **Chapter 12**

# **PARKS AND RECREATION**

## **Inventory of Existing Facilities**

Historically, Birch Bay has met recreation needs of both year round and seasonal residents in three ways. One is the Bay itself. It provides year round opportunities for an array of activities ranging from clamming, swimming, biking and kite flying to more passive pursuits such as viewing sunsets, photography and bird watching. Another primary recreation provider is the private sector. Golf courses, water slides and amusement centers are available to tourists and residents. In addition, some recreation needs are met by the recreation amenities provided for owners and guests of RV resorts, housing subdivisions and condominium complexes.

Besides Birch Bay State Park, public beach access is provided at various points with limited public facilities such as portable rest rooms and parking. Historically, public trespass on privately held tidelands, the definitions of public and private tideland ownership, and public rights to access have been continuing community issues.

Existing park and recreation lands are shown in Figure 12 –1. Table 12-1 shows total acreages for developed and undeveloped parks as well as public beach access points.

## **Developed Public Parks**

### **A. Bay Horizon Park - Central Uplands Neighborhood**

- 68 acre upland Whatcom County Park located about .5 miles from the Birch Bay shoreline.
- Indoor Facilities – Recreation / Resident managers housing building, gymnasium, 4 dormitory buildings which can accommodate 200 overnights, dining hall / kitchen, administration / meeting building.

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- Outdoor Facilities – perimeter trail, abandoned ball fields, group campfire area, group picnic area, community playground with basketball court and play equipment.
- The Park has two primary leaseholders; The Lions Camp Horizon Foundation operates Camp Horizon and hostelling accommodations are provided by Hostelling International.

**Table 12-1  
Existing Public Park & Recreation Lands**

<b>Developed Public Parks</b>	<b>Acres</b>
Central Uplands Neighborhood	137.5
State Parks Neighborhood	194.0
<b>Total</b>	<b>331.5</b>
<b>Undeveloped Public Parks and Reserves</b>	
Cottonwood Reach Neighborhood	4.3
Central Uplands Neighborhood	5.0
State Parks Neighborhood	196.1
<b>Total</b>	<b>205.4</b>
<b>Number of Public Beach Accesses</b>	
Cottonwood Reach Neighborhood	2 accesses
Central Reaches Neighborhood	6
State Parks Neighborhood	4
<b>Total</b>	<b>12 accesses</b>

Figure 12-1  
Birch Bay Parks and Public Lands

## **PARKS AND RECREATION**

### **B. Sunset Farm Equestrian Center - Central Uplands Neighborhood**

- 69.5 acre Whatcom County Parks horse facility located on Blaine Road 0.3 miles south of Birch Bay – Lynden Road.
- Indoor facilities – manager’s residence, hay barn and 16 stall stable.
- Outdoor facilities - training corrals, riding fields.

### **C. Birch Bay State Park - State Parks Neighborhood**

- 194 acre marine park with 8,255 feet of saltwater shoreline and 14,923 feet of freshwater shoreline on Terrell Creek.
- Day use – kitchen shelter with electricity and 120 picnic tables.
- Boat launch – under 16 feet.
- Overnight Accommodations - 147 camp sites, 20 utility sites, RV dump station, restrooms with showers, 10 primitive sites.

## **Undeveloped Public Parks and Reserves**

### **A. Whatcom County Park - Cottonwood Reach Neighborhood**

- Intersection of Cedar Avenue and Anderson Road
- 4.33 acres
- Partial upland-flat / partial ravine
- No current plans for development

## **PARKS AND RECREATION**

### **B. Whatcom County Parks - Central Uplands Neighborhood**

- Bay Road & Kickerville Site
- 5 acres
- Flat
- No current plans for development

### **C. Washington State Dept. Of Wildlife Property – Terrell Creek Estuary**

- 11.1 acres
- Wildlife habitat

### **D. BP Cherry Point Heron Reserve**

- 77 acres
- 250 nest Great Blue Heron Reserve

### **E. BP Cherry Point Natural Reserve**

- 108 acres
- Buffer / habitat reserve

## **Public Beach Accesses \***

### **A. Beachway Ave. Public Access - Cottonwood Reach Neighborhood**

- 37 parking spaces
- Seasonal restroom
- Approx. 550 ft. of public shoreline / tide flats

## **PARKS AND RECREATION**

**B. Cottonwood Drive Public Access - Cottonwood Reach Neighborhood**

- 25 parking spaces
- Seasonal restroom
- Approx. 550 ft. of public shoreline / tide flats

**C. Harborview Road Public Access - Central Reaches Neighborhood**

- 55 parking spaces
- Seasonal restroom
- Approx. 800 ft. of public shoreline/tide flats

**D. Two Golf Course Public Accesses - Central Reaches Neighborhood**

- 7 parking spaces north of golf course
- 30 parking spaces at golf course

**E. Alderson Road Public Access - Central Reaches Neighborhood**

- 5 parking spaces
- Permanent restroom facility

**F. Two Public Accesses Between Alderson & Jackson Rd. Central Reaches Neighborhood**

- Each with 4 parking spaces

**G. Jackson Road Public Access - State Park Neighborhood**

- 22 parking spaces



## **PARKS AND RECREATION**

- Seasonal restroom
- Asphalt / crushed surface

### **H. North Cotterill Blvd. Public Access - State Park Neighborhood**

- 3 parking spaces

### **I. Middle Cotterill Blvd. Public Access - State Park Neighborhood**

- 3 parking spaces

### **J. South Cotterill Blvd. Public Access - State Park Neighborhood**

- 4 parking spaces

\* Some accesses have questions to be resolved regarding the type of public access allowed.

## **Needs Assessment, Parks and Recreation Standards**

Recreation is the heart of Birch Bay's identity. Recreation related commerce continues to be the community's primary industry. The significance of Birch Bay's shoreline as a recreation resource cannot be overstated. It provides high quality passive and active recreation experiences for both residents and visitors. Because Birch Bay is a regional recreation destination for day use and overnight visitors, it provides an opportunity for private sector recreation businesses to thrive.

These two factors; a natural, marine feature that provides recreation opportunities and a recreation oriented private sector, mean that the community's recreation needs are currently being met in a less than typical manner. People only have a certain amount of time to recreate and in most communities, that time might be spent at neighborhood and community parks taking part in organized sports activities or walking and bicycling on formal, constructed trails. In Birch Bay residents appear to have alternative ways to recreate. They live here partially

because they enjoy the unstructured recreation the marine environment provides. Consequently, there is less demand for publicly provided parks, facilities and programs.

Nonetheless, the needs expressed at neighborhood meetings i.e. shoreline enhancement, trails, and neighborhood parks are important and worthy of community action. There is potentially, a long-range community/cost benefit if the Birch Bay community has the desire and can find innovative ways to acquire lands for future park and open space needs as well as easements for a system of trails. Acquiring these lands now rather than later provides an opportunity to significantly shape the community atmosphere and sense of well being in the future. In addition, there are intangible economic and marketing benefits for future commercial and housing projects by having parks, recreation facilities and trails systematically woven into the land use map for the community.

### Needs Assessment

Park and recreation needs vary from community to community. The residents of a major city's urban core have recreation needs that are much different than those of Birch Bay with its natural "playground"- the saltwater tide flats. Nonetheless, all communities share a need to provide open spaces, outdoor and indoor recreation facilities, and trails for present and future generations. The Growth Management Act does not require that comprehensive plans address parks and recreation. However, it is very unusual for a community to look at the future without recognizing that a positive sense of community is diminished by not systematically providing for parks and recreation.

The challenge lies in how a community prioritizes desired park and recreation facilities and then how to find the means to implement given the community's responsibility to provide police, fire and school services as well as streets and utilities. The first step is to assess the needs and desires of current residents and then project as realistically as possible into the future.

The tools available for assessing Birch Bay recreation needs include:

- Standards based on service area.
- Levels of service based on population.
- Citizen input.

## Standards

Since the 1960's the National Park and Recreation Association (NRPA) has provided definitions of park types and standards for both parks and recreation facilities. The following is based on their most recent update in 1996.

**Residential Pocket Parks.** Residential pocket parks are the smallest park type specified by the NRPA. Usually they are less than one acre in size. They are most often intended to serve children under 12 years old and senior citizens. However, they can provide other functions such as view points and ornamental neighborhood landscaped areas. NRPA standards recommend that these parks should be within a 1/4 mile walking radius of the residential area they are intended to serve.

**Non Residential Pocket Parks.** Non-residential pocket parks are not standardized in location, size or number of people served. Their function can vary widely depending on the type of population served. Some are designed to provide places where motorists can stop to look at views or to read about local history. Others can provide a place for shopkeepers and visitors to have a brown bag lunch and to socialize with others.

**Neighborhood Parks.** In an urban environment neighborhood parks form the backbone of a park system. Neighborhood parks combine informal active and passive recreation at a level that fosters neighborhood identity and cohesiveness. They typically provide space for a variety of activities, such as playgrounds, play fields, sport courts and picnic areas. Generally there is no on-site parking. Lighting may or may not be appropriate. The NRPA recommends that neighborhood parks serve people within a 1/4 mile to 1/2 mile walking radius. Recommended size is 1 to 10 acres.

**Community Parks.** Community parks serve more than one neighborhood and have facilities for organized recreational activities such as soccer, baseball and basketball leagues for both youth and adults. Community parks often double as neighborhood parks for nearby residents and therefore should provide for informal and passive neighborhood needs when possible. Community parks

provide on-site parking and lighting. The service area is 1/2 to 3 miles. Recommended size is 15 to 50 acres.

**Regional Park.** Regional parks usually accommodate many different types of recreational activities simultaneously and/or have specialized natural resource, cultural or historical significance. Often these parks are provided by county and state agencies. Birch Bay State Park and Hovander Homestead Park in Ferndale are examples of regional parks. The NRPA recommends a minimum size of 50 acres. The maximum size and the service area can vary widely depending on the type of recreation provided.

**School Parks.** School sites function primarily as playgrounds, fields and indoor recreation facilities for school needs. If there is a cooperative relationship between a school board and a parks and recreation board, these facilities can be utilized for general community use. Size and service areas will vary depending on whether the school is elementary, middle or high school level.

**Natural Resource Reserves.** Natural resource reserve areas refer to lands that have been set aside for preserving significant natural resources/open space and for visual, aesthetic, or industrial buffering. Examples in Birch Bay are all in the State Park Neighborhood; the BP Heron Reserve, the BP Natural Reserve, and the Washington State Game Department Wildlife Reserve.

**Trails.** Trails vary from informal paths to projects such as the Coast Millennium Trail which, when complete, will link White Rock, B.C. to Skagit County, WA. Trails can provide for a variety of users; commuters to work and school, road and off-road bicyclists, walkers and hikers, equestrians, off-road motorcyclists and snowmobilers. There is a wide range of trail standards. Effective trail planning requires that a separate Trails Master Plan be prepared.

### Levels of Service

Another method of calculating needs for parks, trails, and outdoor/indoor recreation facilities is to use the NRPA Level of Service (LOS) standards. Table 12 -2 shows LOS standards for a variety of park

## PARKS AND RECREATION

types. Table 12 – 3 shows LOS standards for selected outdoor recreation facilities located within parks.

**Table 12 - 2**  
**Level of Service Standards for Parks**

Type of Park	Acres/Miles per 1,000 Population
Residential Pocket Parks	0.5 acres
Non-Residential Pocket Parks	n/a
Neighborhood Parks	2.5 acres
Community Parks	2.5 acres
Regional Parks	n/a
School Parks	n/a
Natural Resource Reserves	n/a
Bicycle trails (includes off-street paved)	0.4 miles
Pedestrian/urban hiking trails	1.1 miles
Equestrian trails	1.0 miles

**Table 12 - 3**  
**Level of Service Standards for Outdoor Recreation Facilities**

Type of Facility	Population Needed Per Facility
Softball	1 field per 3,200
Baseball (Lighted)	1 field per 15,000
Baseball (Not lighted)	1 field per 4,960
Soccer	1 field per 4,130
Football (Not lighted)	1 field per 5,680
Multi-purpose	1 field per 4,000
Basketball	1 court per 1,170
Tennis	1 court per 1,170
Swimming pool	1 pool per 26,000

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Table 12-4 shows park and recreation needs if the level of service standards were to be applied to the population projections used for this plan. Table 12-5 compares year 2000 supply to year 2000 needs.

**Table 12-4**  
**Parks and Recreation Needs Based on Level of Service Standards**

<b>Parks</b>	<b>2000 Aactual Population (4961)</b>	<b>2012 Projected Population (7,193)</b>	<b>2022 Projected Population (9,619)</b>
Residential Pocket Parks	2.5 acres	3.6 acres	4.8 acres
Non Residential Pocket Parks	n/a	n/a	n/a
Neighborhood Parks	12.5 acres	18.0 acres	24.0 acres
Community Parks	12.5 acres	18.0 acres	24.0 acres
Regional Parks	n/a	n/a	n/a
School Parks	n/a	n/a	n/a
Natural Resource Reserves	n/a	n/a	n/a
Bicycle trails (incl. off-street )	1.8 miles	2.9 miles	3.8 miles
Pedestrian/urban hiking trails	5.5 miles	7.9 miles	10.6 miles
Equestrian trails	5.0 miles	7.2 miles	9.6 miles
Softball	1.6 fields	2.2 fields	3.0 fields
Baseball (Lighted)	.3 fields	.5 fields	.6 fields
Baseball (Not lighted)	1.0 fields	1.5 fields	1.9 fields
Soccer	1.0 fields	1.7 fields	2.3 fields
Football (Not lighted)	.9 fields	1.3 fields	1.7 fields
Multi-purpose	1.2 fields	1.8 fields	2.4 fields
Basketball	4.2 courts	6.1 courts	8.2 fields
Tennis	4.2 courts	6.1 courts	8.2 fields
Swimming pool (Outdoor)	.2 pools	.3 pools	.4 pools

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**Table 12-5**  
**Current Parks and Recreation Facilities Supply Compared to Needs**

<b>Parks/Facilities</b>	<b>2000 Supply</b>	<b>2000 Needs</b>	<b>Difference</b>
Residential Pocket Parks	0 acres	2.5 acres	- 2.5 acres
Non Residential Pocket Parks	9 acres *	n/a	+ 9.0 acres
Neighborhood Parks	0 acres	12.5 acres	-12.5 acres
Community Parks	68 acres **	12.5 acres	+55.5 acres
Regional Parks	194 acres ***	n/a	+194.0 acres
School Parks	0 acres	n/a	n/a
Natural Resource Reserves	196 acres ****	n/a	+196.0 acres
Bicycle trails (incl. off-street )	6.5 miles*****	1.8 miles	+4.7 miles
Pedestrian/urban hiking trails	6.5 miles	5.5 miles	+ 1.0 miles
Equestrian trails	0 miles	5.0 miles	-5.0 miles
Softball	0 fields	1.6 fields	-1.6 fields
Baseball (Lighted)	0 fields	.3 fields	- .3 fields
Baseball (Not lighted)	0 fields	1.0 fields	-1.0 fields
Soccer	0 fields	1.0 fields	-1.0 fields
Football (Not lighted)	0 fields	.9 fields	- .9 fields
Multi-purpose	0 fields	1.2 fields	-1.2 fields
Basketball	0 courts	4.2 courts	- 4.2 courts
Tennis	0 courts	4.2 courts	- 4.2 courts
Swimming pool (Outdoor)	0 pools	.2 pools	-.2 pools

\* Beach access points

\*\* Camp Horizon Park

\*\*\* Birch Bay State Park

\*\*\*\* Game Dept. Reserve and BP Reserves

\*\*\*\*\* Besides Birch Bay Dr. and the State Park, includes 1.3 miles on the Birch Bay-Lynden Rd. from Harbor view to the eastern boundary of the planning area.

### Factors Influencing Application of Standards

The needs shown in Table 12-4 are averages compiled at the national level. As mentioned at the beginning of this section, communities are not alike and have different needs. Tables 12-4 and 12-5 are useful in that they provide a basis for discussion and refinement. There are other factors that affect the Birch Bay needs analysis. Among them:

- A. The shoreline and tide flats partially fulfill neighborhood park needs for the four neighborhoods that have low bank shoreline access. In addition the shoreline serves, in many respects, as a community park for the upland neighborhoods.
- B. The tide flats provide a high quality “trail” which does not require construction and maintenance funding.
- C. Birch Bay demographics and specialized recreation interests skews application of the standards. The motivation to live in Birch Bay is influenced by an appreciation and enjoyment of the specialized recreation amenities and activities that a warm water, marine environment provide. Clamming and crabbing are not activities appearing on the standards list but they are obviously important to those who live here. Demographic differences also affect application of standards i.e. the average age of the population in Birch Bay is older than national averages.
- D. The housing and RV subdivisions provide recreation opportunities for residents. Pools are perhaps the best example – Birch Bay Village, Leisure Park, Jacobs Landing, Mariners Cove, Latitude 49, Beachwood and others all have pools used by both year round and seasonal residents.
- E. Birch Bay State Park may fulfill some recreation needs for residents although there did not seem to be much usage expressed by those attending neighborhood meetings.
- F. Not all of the factors that influence the application of standards result in a reduction of community recreation needs. With a large day use and overnight temporary population comes pressure on existing facilities especially along the shoreline. Private sector facilities such as the Wet ‘N’ Wild Waterslides, Borderland



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Mini-Golf & Family Fun Center and Miniature World Family Fun Center help to alleviate increased recreation demand.

### Citizen Opinions

The third, and most important, means to assess park and recreation needs is to have organized citizen input. When a community is preparing a Parks and Recreation Plan there is usually an effort to survey citizen desires. There have been two such efforts used in the Birch Bay process:

**Birch Bay Residential Survey:** This survey was conducted by Hebert Research, Inc. in the spring of 2000 and was published as part of the Birch Bay Economic Development Action Plan published in September 2000. It was obvious from the survey that the existing recreational atmosphere of Birch Bay is considered to be a core community value.

Respondents were asked three open-ended questions that are relevant to assessing recreation needs:

1. What do you like best about Birch Bay?

#### Responses

* Beach	57.8 %
* Quiet & tranquil	54.7 %
* Climate	19.8 %
* Fun & friendly	16.7 %
* Environment	16.1 %
* Recreational activities	15.6 %

2. What are the most desirable additions to the community?

#### Responses

* Biking trails	25.0 %
* Retail centers	24.0 %
* Additional restaurants	20.8 %
* Beach boardwalk	18.8 %
* Parks & recreation	17.7 %
* Community center	15.6 %

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* Industry	4.2 %
* Hotels	3.1 %

3. What are the key issues facing Birch Bay in the next five years?

### Responses

* Water & sewage	26.0 %
* Economic Development	22.9%
* Population growth	17.7 %
* Traffic	16.1 %
* Road improvements	12.5 %
* Shoreline management	10.4 %
* Housing	9.4 %
* Law enforcement	8.9 %
* Pollution	8.3 %
* Incorporation	7.8 %
* Protection of natural resources	5.7 %
* Increased littering	5.2 %
* Storm water drainage	5.2 %
* Annexation to Blaine	4.2 %
* Parking	3.1 %
* Parks	3.1 %

It can be seen from the survey responses that while Birch Bay residents would like to have additional recreation amenities, they are not considered to be a key community issue.

**Neighborhood Meetings:** In February and March of 2001, two rounds of meetings were held in each of the ten neighborhoods to identify what residents valued most about their neighborhood and what they saw as neighborhood issues. Two hundred and forty one residents attended these meetings. Discussion at the meetings backs up the survey results. Residents in all neighborhoods described their neighborhoods as quiet and tranquil. They placed high value on views, enjoyment of the beach and the fun and friendly atmosphere in Birch Bay.

Discussion of issues varied from neighborhood to neighborhood but essentially were in line with the survey results. Recreation needs were expressed but not with the emphasis of issues

such as shoreline management, traffic, retail and economic development. Drainage, erosion and natural resource protection issues appeared to be more important at neighborhood meetings than in the survey.

The recreation issues that were discussed the most were:

- Shoreline enhancement and access (both pro and con)
- Pedestrian, bicycle and equestrian trails
- Neighborhood parks (a need for youth)
- Boat launch/marina facilities

## Parks and Recreation Vision, Goals and Policies

### Vision Statement

The following is a section of the Birch Bay vision statement as it relates to parks and recreation. The entire vision statement, including goals and policies, is presented in Chapter 5.

*Public Spaces. Public spaces, namely parks, open space, pedestrian and bicycle trails, and recreation sites have increased significantly during the past twenty years. The new pedestrian and bicycle trail, running from the Canadian border to Bellingham and south, has gained in popularity. Pedestrians and bicyclists along the trail stop at Birch Bay for restaurant and other services, contributing to the economy of the Community. Open space has been set aside and parks and recreation facilities have tended to locate near or adjacent to wetland sites. Appreciation and respect for Birch Bay historic and archeological cultural resources has been woven into community policies and planning.*

### Goals and Policies

Goal PR 1: To provide parks, trails and open spaces, which meet the needs of year round residents and are compatible with neighborhood needs and desires.

Policy PR-1a: Establish the means to assess and refine the recommendations in this plan in more detail.

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Policy PR-1b: Assess community park and recreation desires in a systematic manner at least every five years.

Policy PR-1c: Encourage and facilitate individual neighborhood efforts to identify projects that help to create and maintain neighborhood character and cohesiveness.

Policy PR-1d: Work cooperatively with the City of Blaine, Whatcom County Parks, the State of Washington, and any other governmental agencies and non-profit/private entities to provide and/or enhance recreation facilities and programs.

Policy PR-1e: Integrate park, trail and open space planning with that of transportation, commercial and housing planning.

Policy PR-1f: Acquisitions of lands and easements assume a willing seller.

Goal PR 2: Recognizing that Birch Bay is one of Washington's Shorelines of Statewide Significance, to develop a long-range course of action that provides for high quality recreation use while protecting the resource itself and respecting the rights and ambiance of private property owners.

Policy PR-2a: Coordinate recreation use of the shoreline with the goals and policies of the Shorelines and Critical element of this plan.

Policy PR-2b: Enhance public access and recreation usage in an environmentally sensitive manner.

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Policy PR-2c: Devise methods to balance public/private ownership and recreation usage of the shoreline.

Goal PR 3: To recognize Birch Bay's historic and archaeological attributes and identify and encourage the preservation of lands, sites, and structures that have historic or archaeological significance

Policy PR-3a: Prepare a comprehensive cultural resource inventory that incorporates existing archaeological and historic studies pertaining to the planning area.

Policy PR-3b: Work cooperatively, and in close communication, with agencies and organizations to assure consistency and compliance with local, state, and federal cultural resource policies and legislation. Work closely with local Native American archaeological efforts.

Policy PR-3c: Recognize the potential tourism related economic benefits and the educational value of cultural resource preservation and enhancement. Pursue funding sources to realize these benefits.

Policy PR-3d: Assure that historic designation of buildings, sites and structures are voluntary by owners and in accordance with State registration policies.

## **Future Park and Recreation Needs**

### **Shoreline Recreation Plan**

1. Acquisition or preservation through other means, of the property on the Terrell Creek spit from the north boundary of the Bay Rim Condos ownership to the mouth of Terrell Creek. Based on community discussion, this acquisition is of the highest priority. A first step could be the establishment of a committee to formalize the community's intent and the strategies for accomplishing the project. Issues to be dealt with include such things as:
  - a. Whether the property should be acquired for public access and activity or, as an alternative, acquired (or preserved through other means) for the purpose of maintaining the property as undeveloped open space.
  - b. If the decision is to acquire the property for either development as an actively used park or to simply hold as open space, a working relationship should be established with the Whatcom County Park and Recreation Department to have the project become a high priority item in their Park and Recreation Comprehensive Plan. In addition, solicit the Department's assistance in defining the project and preparing grant applications.
  - c. If the decision is to pursue the alternative of preserving the property as open space without acquisition, then work with Whatcom County Planning to explore methods whereby the property owners could dedicate the property in exchange for density bonuses on their property on the east side of Birch Bay Drive.
2. Purchase of two or three 1 to 3 acre properties on the east side of Birch Bay Drive within walking distance of the shoreline from Alderson Road to Cottonwood Street to provide public parking, rest rooms and possibly showers in a park-like setting.

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3. Create a new boat launch site and/or work with State Parks to resolve any issues and improve the existing boat launch at the south end of the State Park.
4. Acquire and develop high bluff pocket parks in the Point Whitehorn and Birch Point neighborhoods to serve as viewpoints.
5. Implement a signage program along Birch Bay Drive from the North boundary of the State Park to Birch Bay Village that provides two primary functions:
  - a. Communicates to the public behavior that respects the environment and the rights of private property owners.
  - b. Provides interpretive information for the benefit of both residents and visitors similar to the signage in Birch Bay State Park.
6. Work with property owners along Birch Bay Drive to better define and resolve issues relating to road right of way, road-ends and beach/tide-flat ownership.
  - a. Identify and resolve issues relating to road-end ownership and usage especially in the Central Reaches and State Parks neighborhoods.
  - b. Continued effort to work with property owners along Birch Bay Drive with a goal of widening and improving the pedestrian/bicycle shoulders.
7. Acquire the Birch Bay Seafood restaurant building on the waterside of Birch Bay Drive. This assumes a willing seller.

### **Uplands Recreation Plan**

1. Encourage the Whatcom County Park and Recreation Department to work with the community and the Lions Club to prepare and/or refine a Master Plan for Bay Horizon Park.
  - a. There are both indoor and outdoor potential community resources at Bay Horizon Park including abandoned baseball fields at the north end of the

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property, a gymnasium and outdoor basketball courts. This property could serve as a community park for The Terrell Creek, Point Whitehorn, State Park, Central Uplands and Central Reaches neighborhoods. The development of community fields and other projects could be accomplished partially with volunteer effort and by entering into partnerships with other public, non-profit organizations as well as the private sector.

2. Work with the Blaine School District to explore the possibility of purchasing a site in Birch Bay for a future elementary school and community park to meet the needs of residents in the northern part of Birch Bay. The School District has expressed enthusiasm for the concept. Development of this site could be expanded in scope to include other community facilities such as a public library.
3. Explore possibilities for relocation of some or all of Sunset Equestrian Center if the community and the Whatcom County Park & Recreation Department can come to a determination that it is the best interests of all concerned to so.
  - a. This issue is complicated by the fact that the County has an obligation to represent the intent of the family from whom the property was obtained.

### Trail Plan

1. Identify and clarify all public ownerships, easements, and conditions of past plat/project approvals that provide for full or partial public access.
2. Provide linkage between existing parks:
  - a. A trail connecting Birch Bay State Park and Camp Horizon Park emphasizing interpretation of both the shoreline and upland environments. Consider developing an indoor interpretive center at Camp Horizon that could be utilized for programs conducted by the Lions Club, Whatcom County Parks, the community and State Parks.



- b. An equestrian trail connecting the Blue Note Stables, Sunset Equestrian Center and Peace Arch Equestrian Center.
3. Look at the potential for developing east-west trails that provide off street pedestrian travel from the upland neighborhoods to the shoreline.
  - a. There are existing public rights-of-way that can provide the foundation for these corridors. Another potential resource for this concept is the ravines and creeks, most of which run east-west.
4. Work with Whatcom County Public Works to assure that road improvements meet desired community standards for bicycle/pedestrian lanes whenever possible. It is a Birch Bay Community Plan goal to make all arterials safe for both bicyclists and pedestrians.
5. Provide trails that allow for bicycle and pedestrian travel to both neighborhood and general commercial centers.
6. Work in conjunction with the development of the Coast Millennium Trail as shown in Figure 12-2.

### **Structure and Implementation**

Determine the organizational structure needed to accomplish the above including coordination with the following agencies.

- a. There is currently a Special District called the Northwest Park & Recreation District. It has the same boundaries as the Blaine School District. While it has been in existence for a number of years, the District has been inactive and not exercising its option of presenting for voter approval a levy and/or bond issue for the purpose of providing parks, recreation facilities and recreation programs. The District Commissioners are apparently currently discussing what the District could or should be doing. The community should establish the means to communicate effectively with the District to determine what part the District

should play in the provision of parks, facilities and programs in Birch Bay. The primary tool would be to continue to have Birch Bay representation on the 5 member District Commission.

- b. The Whatcom County Parks and Recreation Department is currently the primary provider for Birch Bay public recreation. The Department is overseen by a seven member Advisory Commission to the Whatcom County Council. Birch Bay should seek to have a representative on the Commission.
- c. There is a need to formalize communications with the Whatcom County Public Works Department. Road and street enhancement projects can reflect community desires for pedestrian and bicycle lanes and paths. In addition, the Department can be a resource in inventorying and implementing a program to deal with the issues of public vs. private ownership as well as rights of ways for trails.
- d. The Blaine School District can play a significant role in meeting future Birch Bay outdoor and indoor recreation needs. Every effort should be made to work closely and continuously with the Administration and School Board to explore possibilities.
- e. There are numerous Washington State agencies which can act as recreation resources for the community. Each has its own expertise and access to significant funding sources. Among them:
  - Washington State Parks
  - Department of Natural Resources
  - Department of Ecology
  - Department of Fish and Wildlife
  - Office of Economic Development (Tourism)

Figure 12-2  
Coast Millennium Trail

## **Cultural Resources**

### **Cultural Resources Definition**

For this plan, the definition of cultural resources comes from the Washington State Office of Archaeology and Historical Preservation

“The foundation of historic preservation planning is the identification of cultural resources, including, archaeological, historic and traditional cultural places. These can be buildings, structures, sites, districts, objects and landscapes. Together they comprise Washington's cultural heritage.”

### **What Are They and Why Are They Important?**

A nation, state or community's sense of place includes the influence of past events, both natural and man-made. Respect for the past (or lack of) is reflected in present day community decision-making ranging from land use to economic development. Past events can be significant natural or man-made occurrences that taken together have shaped the present day landscape of a community. The Mount Saint Helens eruption is a prime example of a natural event that had a recent major influence on the physical landscape and the cultural and economic decision making of an entire region. Closer to home, Whatcom County residents reflect on the steam that periodically is visible from our own active volcano, Mount Baker and speculate on the effects of an eruption.

Man-made past events that shape today's actions include historic and pre-historic settlement patterns and the buildings, sites, and artifacts associated with that settlement. Hovander/Tenant Lake Park and Pioneer Park in the Ferndale area are examples of the educational and economic benefits that a community can derive from preserving historic lands and structures.

Birch Bay exists as a somewhat unique and very significant example of a natural marine formation that has lent itself to a certain type of human settlement. According to existing archaeological studies, Birch Bay functioned primarily as a seasonal summer place for Native Americans and settlers in the late 1800s. It is not difficult to imagine that a recreation atmosphere has existed here for a long time. The warm and shallow water and the exposed tide flats with abundant and easily accessible food sources

have been the underpinnings of a relaxed and benign atmosphere for human settlement.

Cultural resource planning is based on an assumption that there is a community awareness and appreciation of the value in defining, inventorying, and prioritizing the elements that make up a community's cultural heritage. Birch Bay may be young in terms of post Native American settlement heritage relative to other communities such as those on the east coast or other parts of the world. Post Native American local historical significance will build as time goes by, but the foundations can be laid today. In the meantime, there is a need and value in addressing especially the archaeological and historic Native American past. There is an opportunity for the community and the local Native American tribes to work together to develop tourism related projects that are based on an opportunity to educate.

The cultural resource discussion in this plan can set the stage to better assure that cultural resource planning becomes an integral part of Birch Bay decision-making.

### **Cultural Resource Legislation and Administration**

Cultural resource awareness, protection, and preservation at the local level are influenced to by federal and state legislation. The primary control is at the state level through legislation and administration of that legislation by the Washington State Office of Archaeology and Historic Preservation (OAHP). Whatcom County has limited legislative and regulatory cultural resource tools and operates under the State's procedures. The following is a taken from a summary statement from OAHP:

“Environmental laws and review processes at the federal, state, and local level require consideration be given to protecting significant historic, archaeological, and traditional cultural sites from damage or loss during development.

Environmental laws such as the National Historic Preservation Act, the State Environmental Policy Act (SEPA), and the Shoreline Management Act require that impacts to cultural resources be considered during the public environmental review process.

The National Historic Preservation Act requires that all federal agencies consider cultural resources as part of all licensing, permitting, and

funding decisions. As part of that process, each agency must consult with OAHP to assure that cultural resources are identified, and to obtain the formal opinion of the Office on each site's significance and the impact of its action upon the site.

Under SEPA, the Office is the sole state agency with technical expertise in regard to cultural resources and provides formal opinions to local governments and other state agencies on a site's significance and the impact of proposed projects upon such sites."

### **Significant Cultural Resource Legislation:**

#### National:

- 1906 Antiquities Act
- 1966 National Historic Preservation Act – Section 106
- 1979 Archeological Resources Protection Act of
- 1992 Native American Graves Protection and Repatriation ACT

#### State:

- RCW 25.48 - Archaeological Excavation and Removal Permit
- RCW 27.34 – State Historical Societies- Historic Preservation
- RCW 27.44 – Indian Graves and Records
- RCW 27.53 – Archeological sites and Resources

#### Local:

- County SEPA Ordinance
- County Shoreline Management Program
- Whatcom County Goals and Policies – Chapter 10

### **Cultural Resource Survey and Reporting Guidelines**

The following is another summary from OAHP discussing cultural resource surveys.

Agencies are required to assess the effects of their proposed projects on significant archaeological and historic properties under both federal and

state law. In order to accomplish this, agencies and the public consult with the Office of Archaeology & Historic Preservation (OAHP) concerning the significance of discovered properties and the effect of proposed projects upon any significant archaeological or historic properties.

This document details the general principles and methods in conducting a cultural resource survey for compliance purposes and lists the organizational format of a professional cultural resource survey report and the kinds of information needed to make a reasoned evaluation of the data by independent third party reviewers.

Because varying federal and state laws may be involved in any specific project, this document provides only general summary information. Specific references for further detailed information as of this publication date for identifying archaeological properties are provided. For specific procedural and legal details, we refer you to the lead federal or state agency.

These guidelines are not regulatory and do not set nor interpret any agency's policies, regulations, or permit requirements. The document is intended to provide general technical advice about cultural resource activities and methods. Agencies conducting multiple small scale surveys are encouraged to contact OAHP regarding field strategies and reportage requirements for classes of projects requiring cultural resource inventories.

These guidelines are in large part adapted from the Department of Interior, National Park Service, Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation. Federal Register, Vol. 90, No. 140:44716."

### **Cultural Resource Identification and Survey Efforts**

Survey efforts are undertaken to gather information about historic properties in a specific area. The scope of the inventory, or determining the area of potential effect, will depend on: existing knowledge about properties, the type of project area, the nature of the undertaking and the goals of the cultural resource inventory.

#### **Principle 1: Identification and Survey of Historic Properties are Undertaken to the Degree Required to Make Specific Decisions**

- Archival research and on site inspection activities should be designed to gather the information necessary to

achieve defined identification goals. The objectives, chosen methods, techniques, and expected results are specified in the research design.

- Identification activities should use a search procedure consistent with the management needs for information and the character of the area to be investigated. Careful selection of methods, techniques and level of detail is necessary so that the gathered information will provide a sound basis for making decisions.

### **Principle 2: Results of Identification Activities are Integrated Into the Planning Process**

- Results of cultural resource inventories are reviewed for their contribution to existing planning data. Archival research or field data may refine the understanding of one or more historic contexts or property types. Incorporation of the identification activities into the planning process is necessary to ensure that the planning efforts are based on the best available information.

### **Principle 3: Identification Activities Include Explicit Procedures for Record Keeping and Information Distribution**

- Information gathered in identification activities is only useful in other preservation planning activities and scientific studies when it is systematically gathered and recorded, made available to those responsible for planning and scientific research, and communicated to the interested public.
- The results of identification activities should be reported in a format that summarizes the design and methods of the identification activities, provides a basis for others to review the results, and states where information on identified properties is maintained.
- Sensitive information, like the location of archaeological sites and traditional cultural properties, must be safeguarded and consistent with public disclosure requirements.



### **Principle 4: Survey Activity Entails Effective Consultation with Concerned Tribes, Local Governments, Interested Public, Professional Community and Other Governmental Agencies**

- Cultural resource inventory and research requires effective communication and consultation with concerned Native American Tribes, local governments, historical organizations, and state and federal agencies that have review responsibility. All identification activities should be coordinated with concerned entities to assure that their concerns and data are incorporated into the cultural resource report and environmental process.
- Archaeological information such as inventories, surveys, and maps must be appropriately safeguarded due to the sensitive nature of the sites. Under federal, state and local policies and procedures general public access to this information is limited.

## **Action Strategies**

1. Periodically assess and update cultural resource data and policies in a systematic manner.
2. Due to the quantity and quality of known and potential Native American archaeological sites along the Birch Bay shoreline, encourage the County to enhance efforts to work closely with the affected Native American tribes and Office of Archaeology and Historic Preservation.
3. Education programs should be pursued to the fullest extent possible regarding both archaeological and historic resources. Birch Bay State Parks is currently doing some of that work. They, and the community, would benefit significantly from the establishment of an indoor facility that would include archaeological and historic elements as part of an overall interpretive program. Such a facility would provide a vehicle for enhancement of a closer working relationship with local Native American tribes.
4. Encourage Whatcom County to refine shoreline related archaeology and history issues as needed when the County's Shoreline Management program is updated.

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5. Include affected Native American tribes in efforts to implement the community's term project.
6. Encourage the County to consider the establishment of a Whatcom County Archaeological and Historic Preservation Commission. The establishment of such a commission could lead to more effective efforts to secure available funding.

## Chapter 13

# ECONOMIC DEVELOPMENT

## General Overview

"Economic Development" is a term that everyone uses and understands but one that eludes a common definition. The process of economic development is most often outside public view but the results are quite visible. A manufacturing plant, a shopping center, an office park, all are the visible results of economic development. Upward mobility from a minimum wage job to a family wage job is also economic development that is noticed at the cash register but not necessarily seen.

Local governments in Washington State, including Whatcom County are experiencing change. Government financial resources are dwindling while its responsibilities are increasing. Therefore, more and more governments are turning to economic development to try to improve the living conditions of its citizens.

Birch Bay is a microcosm in economic development. It has no influence in matters relating to such global matters as North American Free Trade Association (NAFTA) or restricting textile imports from the People's Republic of China. Economic development at Birch Bay means:

- Provide retail and service facilities locally to meet the needs of the current and expanding population of Birch Bay.
- Encourage and support the expansion of the tourism industry and its off-site support services and facilities.
- Promote the location of office and research parks that employ persons above the minimum wage scale.
- Protect the existence and well being of resource based industries that market their products outside the area and pay the highest wages.

The Birch Bay territory for economic development is, in most cases, defined as the Birch Bay Census Designated Place. At times for statistical reporting purposes, it reaches outside this border and includes all of the City of Blaine and the BP Cherry Point industrial complex.

## Income

### Per Capita Income

Per capita income in Birch Bay area rose from \$6,837 in 1980 to \$15,220 in 1990 as reported in the US Census statistics. Claritas, Inc., a national research firm estimates that the per capita income in the Birch Bay area rose to \$24,121 in 1999 and will further rise to \$30,321 in 2004. Claritas, Inc. reports that the per capita income in Birch Bay area in 1999 was about \$4,000 more than in Whatcom County or the City of Blaine. In the year 2004, the difference will grow to about \$6,000. The per capita income for Whatcom County, the City of Blaine and Birch Bay is shown in Table 13-1.

The per capita income trends from 1980 to 2004 for Whatcom County, the City of Blaine and Birch Bay are shown in Figure 13-1.

**Table 13-1**  
**Per Capita Income, 1980 - 2004**  
**Whatcom County, City of Blaine, Birch Bay**

Area	1980 US Census	1990 US Census	1999 Estimate	2004 Estimate
Whatcom County	\$7,269	\$13,698	\$20,410	\$24,714
City of Blaine	6,809	13,427	20,325	24,926
Birch Bay	6,837	15,220	24,121	30,321

Source: Claritas, Inc., Household Trends Report, Whatcom County, 15 June 2000

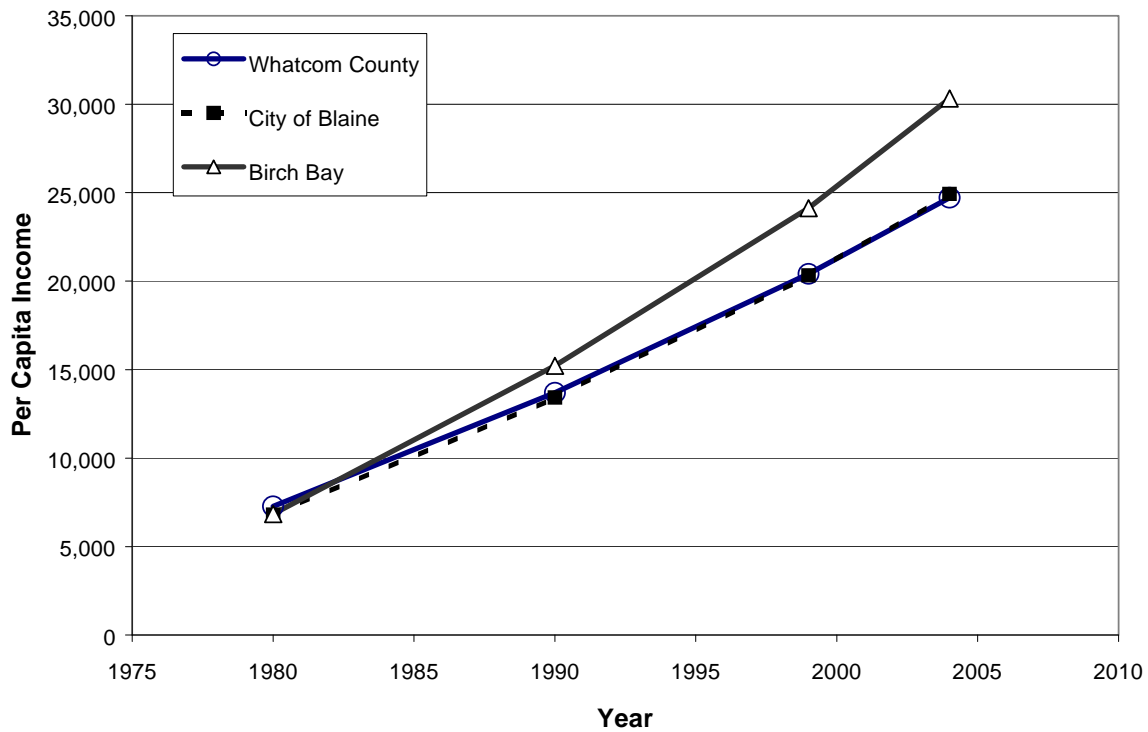
### Household Income

Household income in Birch Bay is reported both as average household income and as median household income. Average household income is defined as taking the total income generated by all households and dividing it by the number of households. The median household income is the middle household income value of all household income values arranged in order of size.

## ECONOMIC DEVELOPMENT

In the Birch Bay area, the average household income grew from \$18,664 in 1980 to \$39,086 in 1990. Claritas, Inc. estimates that the average household income in the Birch Bay area reached \$61,410 in 1999 and will reach \$76,783 in 2004. The estimated average and median household incomes for Whatcom County, the City of Blaine and Birch Bay for the years 1999 and 2004 are shown in Table 13-2

**Figure 13-1**  
**Per Capita Income 1980 - 2004**  
**Whatcom County, City of Blaine, Birch Bay**



As presented in Table 13-2, the average household income and the median household income in Birch Bay exceed those of Whatcom County and the City of Blaine. Also, the growth in average and median household income is estimated to grow faster in Birch Bay than in Whatcom County or the City of Blaine. A noteworthy statistic is that the average household income is estimated to grow at a faster rate than the median household income. This means that the number of households above the average income is growing faster than those below the average or the high income households are earning significantly higher incomes. The net result is that

## ECONOMIC DEVELOPMENT

the overall wealth of Birch Bay is estimated to increase. The estimated average household income for Whatcom County, the City of Blaine and Birch Bay for the years 1999 and 2004 are shown in Figure 13-2.

**Table 13-2**  
**Household Income Estimate**  
**Whatcom County, City of Blaine, Birch Bay**

Measure	Whatcom County			City of Blaine			Birch Bay		
	1999	2004	% change	1999	2004	% change	1999	2004	% change
Average	\$52,254	\$62,876	20.3	\$51,285	\$62,457	21.8	\$61,410	\$76,783	25.0
Median	39,068	43,624	11.7	37,667	43,108	14.4	46,250	54,663	18.2

Source: Claritas, Inc., Household Trends Report, Whatcom County, 15 June 2000

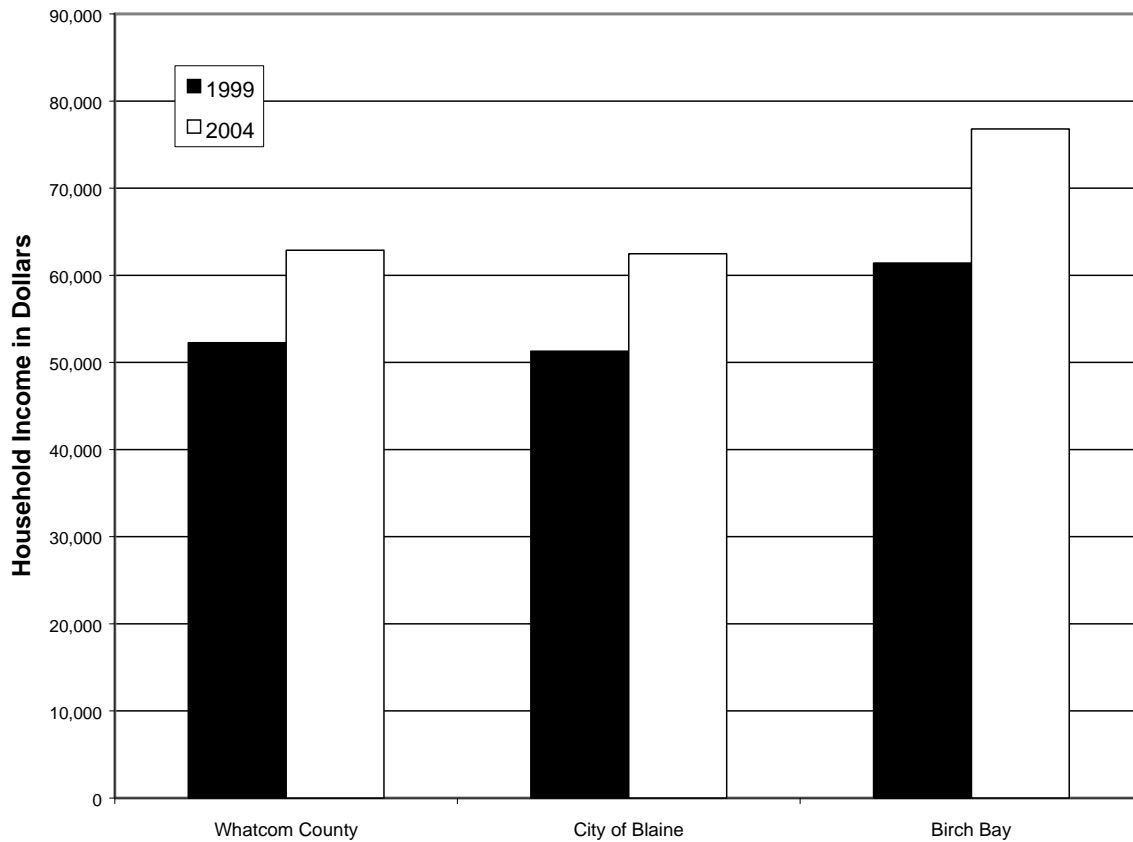
Comparing average household income trends to median household income trends tells us something about the development trends. The ratio of average household income to median household income for Birch Bay from 1999 to 2004 is estimated to increase from 1.33 to 1.40. This means that Birch Bay's wealth is increasing, but not necessarily the number of households above the average income level. Estimated household income ratios, average divided by mean, for Whatcom County, the City of Blaine and Birch Bay for the years 1999 and 2004 are shown in Table 13-3 and Figure 13-3.

## Household Wealth

Researchers have determined that household wealth is a good indicator of economic health. The measurement of household health considers such factors as property or land values, the amount of savings deposits, income, etc., and then factors these considerations by the number of households in the area. Claritas, Inc. estimated that the average household wealth in Whatcom County in 1999 was \$144,157 and is estimated to grow to \$162,092 in 2004. Birch Bay's average household wealth was estimated by Claritas, Inc. to be \$196,892 in 1999 and is

## ECONOMIC DEVELOPMENT

**Figure 13-2**  
**Average Household Income Estimate**  
**Whatcom County, City of Blaine, Birch Bay**



**Table 13-3**  
**Household Income Estimate**  
**Comparison of Average and Median**  
**Whatcom County, City of Blaine, Birch Bay**

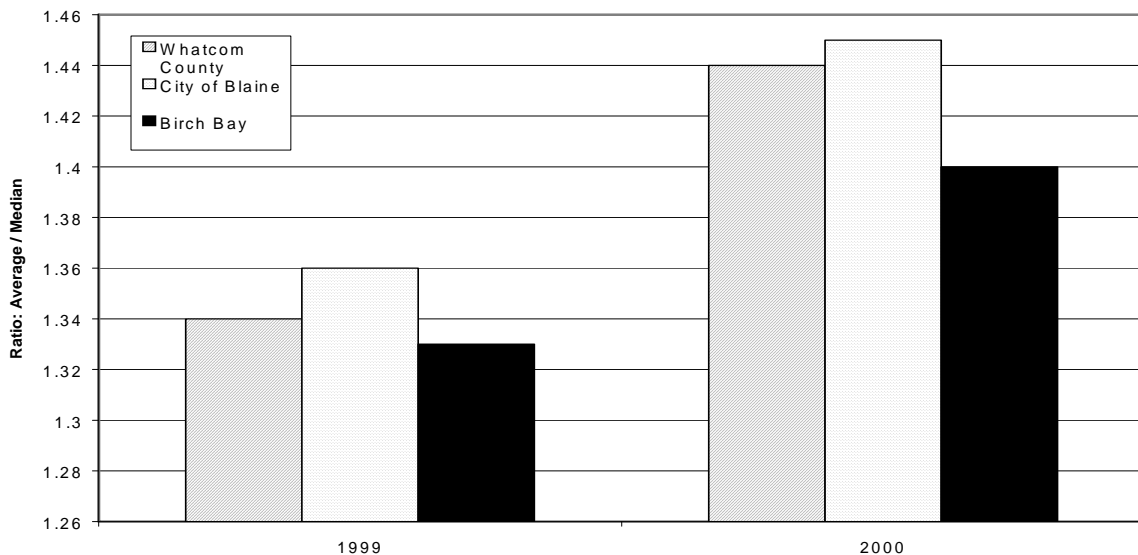
Area	1999			2004		
	Average	Median	A/M	Average	Median	A/M
Whatcom County	\$52,254	\$39,068	1.34	\$62,876	\$43,624	1.44
City of Blaine	51,285	37,667	1.36	62,457	43,108	1.45
Birch Bay	61,410	46,250	1.33	76,783	54,663	1.40

Source: Claritas, Inc., Household Trends Report, Whatcom County, 15 June 2000

estimated to grow to \$225,119 in 2004. The estimated average and median household wealth for Whatcom County, the City of Blaine and Birch Bay for the years 1999 and 2004 are shown in Table 13-4. The estimated average household wealth for Whatcom County, the City of Blaine, and Birch Bay are shown in Figure 13-4.

Comparing average household wealth trends to median household wealth trends tells us something about the development trends. The ration of average household wealth to median household wealth in Birch Bay from 1999 to 2004 is estimated to decrease from 2.14 to 1.94. This means that the median is moving closer to the average. This, in turn, means that the household wealth of those who are currently below the average is increasing faster than those who are currently above the average household wealth.

**Figure 13-3**  
**Household Income Ratios**  
**Ratio of Average to Median Estimate**  
**Whatcom County, City of Blaine, Birch Bay**





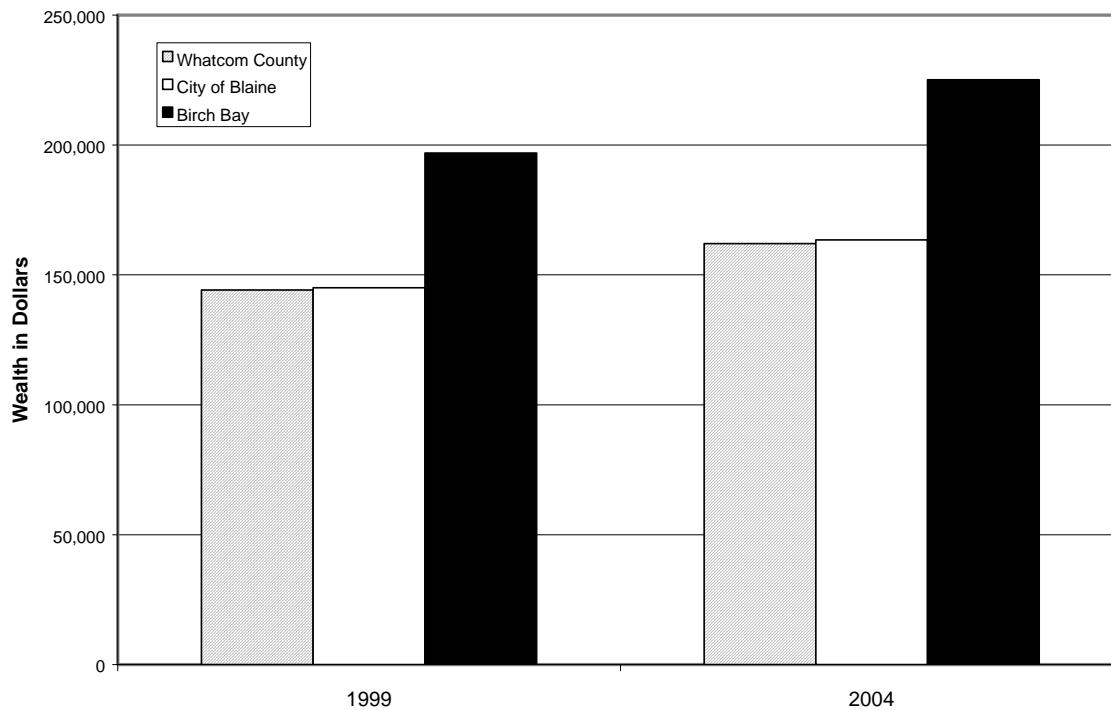
## ECONOMIC DEVELOPMENT

**Table 13-4**  
**Household Wealth Estimate**  
**Whatcom County, City of Blaine, Birch Bay**

Measure	Whatcom County			City of Blaine			Birch Bay		
	1999	2004	% change	1999	2004	% change	1999	2004	% change
Average \$	144,157	162,092	12.4	145,084	163,512	12.7	196,892	225,119	14.3
Median \$	63,741	74,603	17.0	71,739	82,246	14.6	91,820	115,688	26.0

Source: Claritas, Inc., Household Trends Report, Whatcom County, 15 June 2000

**Figure 13-4**  
**Average Household Wealth Estimate**  
**Whatcom County, City of Blaine, Birch Bay**



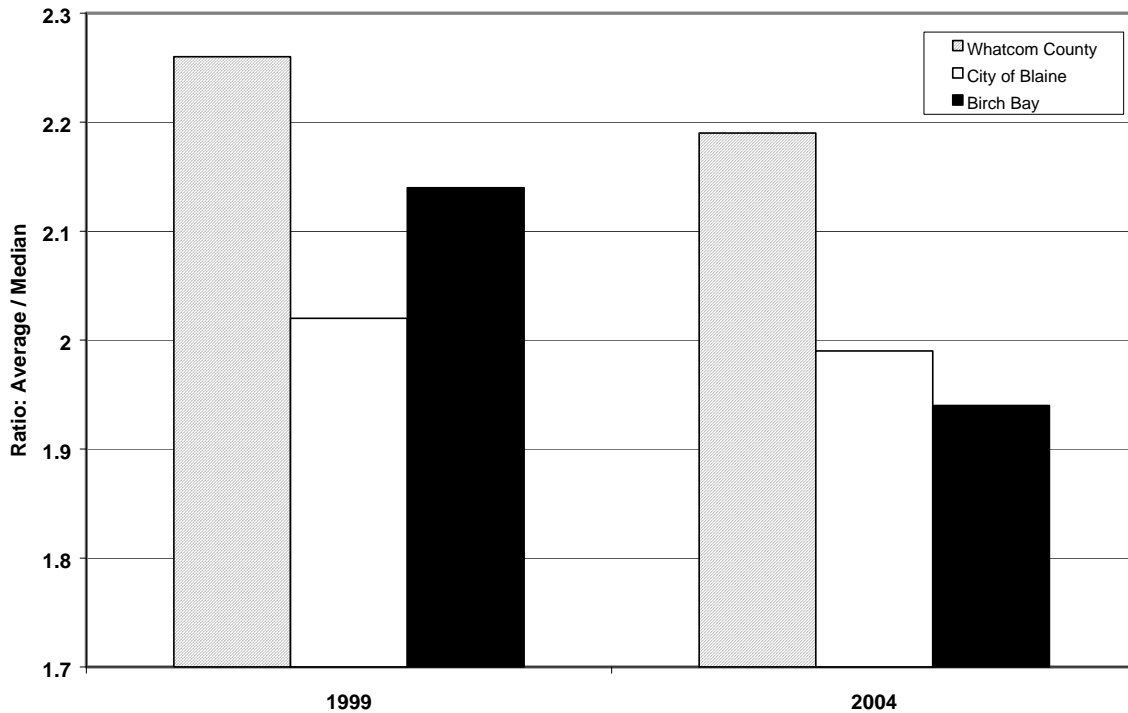
## ECONOMIC DEVELOPMENT

**Table 13-5**  
**Household Wealth Estimate**  
**Comparison of Average and Median**  
**Whatcom County, City of Blaine, Birch Bay**

Area	1999			2004		
	Average	Median	A/M	Average	Median	A/M
Whatcom County	\$144,157	\$63,741	2.26	\$162,092	\$74,603	2.19
City of Blaine	145,084	71,739	2.02	163,512	82,246	1.99
Birch Bay	196,892	91,820	2.14	225,119	115,688	1.94

Source: Claritas, Inc., Household Trends Report, Whatcom County, 15 June 2000

**Figure 13-5**  
**Household Wealth Ratios Estimate**  
**Comparison of Average and Median**  
**Whatcom County, City of Blaine, Birch Bay**



## Employment

### County Employment

From 1995 through 1999, the civilian labor force in Whatcom County grew by 2,900 persons. Table 13-6 shows the civilian labor force, employment and unemployment statistics as reported by the Washington State Department of Employment Security. It should be noted that the employment statistics reported by the Department of Employment Security represent what is considered "covered employment." Covered employment means employment that is subject to unemployment compensation regulations. Many self employed and individual contractors are outside the unemployment compensation regulations and are not included in the employment statistics reported by the Department of Employment Security. About 15 percent of employment is outside the covered employment classification.

**Table 13-6**  
**Employment and Unemployment Trends**  
**Whatcom County**

Universe	1995	1996	1997	1998	1999
Civilian Labor Force	78,200	78,500	78,800	78,900	81,100
Total Employment	72,500	72,600	74,100	74,400	76,900
Total Unemployment	5,700	5,900	4,600	4,600	4,200
Percent Unemployment	7.3	7.5	5.8	5.8	5.2

Source: Department of Employment Security, Labor Market and Economic Analysis Branch, "Resident Civilian Labor Force and Employment in Bellingham MSA (Whatcom County)" April 2000

As noted in Table 13-6, employment or the number of covered jobs in Whatcom County grew by 4,400 from 1995 to 1999. Reported unemployment decreased from 5,700 to 5,000, a drop of 12.3 percent. The unemployment rate dropped from 7.3 percent in 1995 to 5.3 percent in 1999.

## **Birch Bay and Blaine Employment**

The Washington State Department of Employment Security reports that in 1999 there were 2,077 persons employed in the Birch Bay area. Of the 2,077 persons employed, 583 were in manufacturing. Approximately 500 of the manufacturing jobs are from the BP plant in the Cherry Point Industrial Urban Growth Area. The number of covered employees by employment category is shown in Table 13-7 for the City of Blaine and Birch Bay.

**Table 13-7**  
**Comparative Employment 1999**  
**City of Blaine, Birch Bay**

<b>Industry</b>	<b>City of Blaine</b>	<b>Birch Bay</b>
Agriculture	14	4
Mining	3	17
Construction	94	58
Manufacturing	152	583
TUC	77	230
Wholesale	125	18
Retail	308	449
FIRE	79	41
Services	300	594
Government	73	83
All Industry	1,225	2,077

Note: Approximately 500 of the manufacturing jobs are from BP plant in the Cherry Point Industrial Urban Growth Area.

Source: The Russell Group, Edmonds, Washington

## **Compensation and Wages**

The Russell Group of Edmonds, Washington, forecasts that more than 50 percent of Whatcom County's job growth from 1999 to 2006 will be in occupations that require a college degree or more. Just about 18 percent of the new jobs will be available to those without a high school education. The above statistics represent a national trend. Table 13-8 illustrates the 1996 national earnings and unemployment rates by educational level.

## ECONOMIC DEVELOPMENT

**Table 13-8**  
**National Earnings and Unemployment 1996**

<b>Educational Level</b>	<b>Median Annual Earnings</b>	<b>Unemployment Rate</b>
Less than High School	\$16,000	8.7 %
High School Diploma	\$23,000	4.2 %
Associate Degree	\$29,000	3.3 %
College Graduate	\$39,000	2.2 %

Source: United States Department of Commerce, Bureau of Labor Statistics

The Washington State Department of Employment Security in their "Covered Employment and Wages, By Industry, 1998" report that the average wage in Whatcom County in 1998 was \$24,783. The highest wages of \$35,810 were paid to those employed in the manufacturing industry. Retail industry paid the lowest wages, at \$14,410. A listing of average wages paid in Whatcom County in 1998 is show in Table 13-9.

## Business and Industry

Sales by business and industry in the Birch Bay/ Cherry Point area totaled \$177 million in 1998, amounting to about 2.2 percent of total County sales. In the Birch Bay/ Cherry Point area, manufacturing, retail and TCU (transportation, communications, and utilities) were the top sales producers. Manufacturing sales were \$45 million, amounting to about 25% of all sales in the area. Petroleum refining (\$22 million), rubber and plastics products (\$8 million) and paper products (\$7 million) were the Birch Bay/ Cherry Point area's primary manufacturing industries.

The major retail sellers in the Birch Bay area were eating and drinking places (\$6.5 million), liquor stores (\$5.0 million), food stores (\$5.1 million) and building materials, and garden supplies (\$7.1 million).

Total sales in Whatcom County amounted to \$7,981,000,000 and in the City of Blaine, \$142,000,000. Total sales by business type for Whatcom County, the city of Blaine, and Birch Bay is shown in Table 13-10.

## ECONOMIC DEVELOPMENT

**Table 13-9**  
**Whatcom County Average Wages, 1998**

Industry	Annual Average Wage
Manufacturing	\$35,810
Construction	\$33,905
Mining	\$33,759
Finance, Insurance, Real Estate	\$31,439
Wholesale Trade	\$31,321
Transpt., Communic., Utilities	\$31,272
Government	\$27,309
Services	\$21,576
Agriculture, Forestry, Fishing	\$14,882
Retail Trade	\$14,413
Total	\$24,783

Source: Washington State Department of employment security, "Covered employment and Wages, By Industry, 1998", 5 Nove

**Table 13-10**  
**Total Sales, Whatcom County, City of Blaine, Birch Bay**  
**Million Dollars**

Business	Whatcom County	City of Blaine	Birch Bay	Percent of Total Sales
Retail	\$2,259	\$20	\$41	23.2
Wholesale	2,107	25	18	10.2
Services	914	20	28	15.8
Construction	836	20	10	5.6
Fin., Ins., Real Estate	828	14	4	2.3
Manufacturing	555	13	45	25.4
Trans., Comm., Utilities	371	11	30	16.8
Agriculture	106	0	0	0.0
Mining	5	0	1	0.6
Total	\$7,981	\$142	\$177	100.0

Source: VDS Facts Database, using data from InfoUSA, Claritas, Inc. Arlington, VA.

Note: Statistics for Birch Bay include the surrounding rural area and portions of Cherry Point.

## Consumer Expenditures

### Household Expenditures

The average annual household expenditures for Birch Bay exceeded those of Whatcom County and the City of Blaine. The average annual household expenditure for Birch Bay in 1999 amounted to \$38,293. In Whatcom County the average annual household expenditure amounted to \$34,639 and \$34,046 in the City of Blaine. Comparisons of average annual household expenditures are shown in Figure 13-6.

Average annual household expenditures for Whatcom County, the City of Blaine and Birch Bay are shown by major grouping in Table 13-11. The table also shows a "Market Index." A "Market Index" is the ratio of weekly average household expenditure for the geographical area compared to the United States total. A market index greater than 1 indicates that expenditures are greater than the national average.

Households in Birch Bay expend more than the national average on all expenditure groupings, except personal items. Noticeable differences are in shelter, entertainment, household items and transportation. Expenditures on education and on food and drink also exceed the national average by a significant amount.

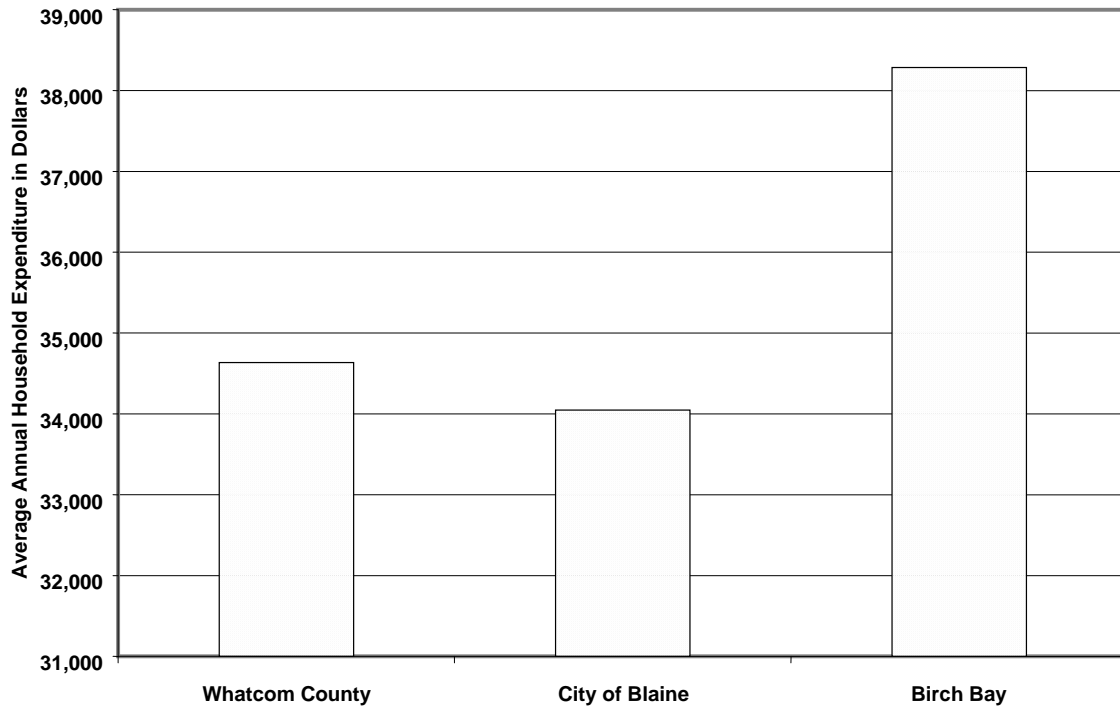
Households in Whatcom County expend significantly more money on shelter than do those on a national scale. Overall, Whatcom County closely resembles the expenditure patterns of those on a national scale.

Household expenditures in the City of Blaine are slightly below the national average. Households in the City of Blaine expend more than the national average on food and drink, household items, entertainment, shelter, and transportation.

### Expenditure Capture

The 2,125 households in the Birch Bay area, as reported in the 2000 US Census, generate a buying power in excess of \$81 million. Comparing the buying power with the reported sales as presented in Table 13-10, the conclusion is obvious. There is a significant amount of buying power in Birch Bay that is not currently captured in sales. Households in the Birch

**Figure 13-6**  
**Average Annual Household Expenditures**  
**Whatcom County, City of Blaine, Birch Bay**



Bay area spend their disposable consumer dollars outside the Birch Bay area. Any quantification of the leakage requires a detailed market analysis by sales category, which is outside the scope of this document. The conclusion, however, is obvious. There is a great potential for retail and service facilities to locate in the Birch Bay area to capture the household consumer dollar, currently spent outside the Birch Bay area.

## Infrastructure, Land Use and Development

A number of prominent economists argue that economic development is best achieved by having in place the necessary infrastructure for roads, water, sewer, energy resources, communications, and general government services such as



## ECONOMIC DEVELOPMENT

**Table 13-11**  
**Average Annual Household Expenditures**  
**Whatcom County, City of Blaine, Birch Bay**

Grouping	Whatcom County		City of Blaine		Birch Bay	
	Expend.	Market Index	Expend.	Market Index	Expend.	Market Index
Food, Drink	\$7,608	1.07	\$7,551	1.05	\$8,104	1.15
Personal Items	723	0.92	614	0.91	650	0.97
Household	2,627	1.07	2,554	1.05	2,953	1.21
Apparel	2,340	0.98	2,272	0.85	2,597	1.05
Entertainment	2,911	1.13	2,855	1.10	3,277	1.27
Shelter	7,195	1.17	7,005	1.16	7,598	1.28
Transportation	7,738	1.08	7,697	1.07	8,979	1.24
Health Care	2,206	0.90	2,256	0.93	2,559	1.04
Insurance	657	0.84	643	0.82	853	1.09
Education	624	0.98	589	0.92	723	1.13
Total	\$34,629	1.01	\$34,046	0.98	\$38,293	1.14

Source: US Department of Commerce, Bureau of Labor Statistics , Consumer Expenditure Survey

fire and police. Other infrastructure elements such as parks and recreation, schools, health care facilities, also play a critical role.

The Birch Bay community is actively moving in a direction that assures future developers that there is an orderly land use plan in place and infrastructure systems such as roads, water and sewer are available or will be available at the time of development. The goal here is to develop a self-contained community where the community's retail and service needs are met within the community, eliminating the need for families to travel outside the area to purchase groceries and other necessities and needed personal services.

The capital facilities plan, as presented in Chapter 16 of this report presents the short and long-range plans for infrastructure improvements in roads, water, sewer, stormwater and other capital expenditures. Chapter 15 outlines a number of governance alternatives that the community may wish to pursue. For example, if the incorporation alternative is chosen by the electorate, the Birch Bay community will gain recognition as a municipality and an urban center alongside with its neighbors of the cities of Blaine, Lynden and Ferndale.

### Developers and Development Projects

This draft plan makes the assumption that urban development and environmental protection can coexist. The insurance policy to make sure it happens is the Washington State Growth Management Act and its implementation mechanisms such as the Whatcom County's Comprehensive Plan, Development Regulations, and the Birch Bay Community Plan element of the County's plan.

The Birch Bay Community Plan is the blueprint or predictor where growth can take place and under what conditions, where utility services are available or will be made available and what areas are unlikely to develop due to the existence of substantial wetlands. The environmental integrity of the area is further protected by County's Development Regulations. The Growth Management Act not only requires the County to update their Comprehensive Plan but also it's Development Regulations that includes the Critical Areas Regulations. And the County is in the process of updating its shoreline development regulations.

The current planning process, the updating of the Birch Bay Community Plan, further gives the citizens a voice in the review of development proposals. All major development proposals are subject to community review and comment. The Birch Bay Community Plan Steering Committee, by having updated the Community Plan, has recognition and standing before the County's Planning Commission and the County Council. Administrative decisions on development applications can be appealed to the County's Hearing Examiner and eventually to the County Council. The Steering Committee can play a key role in representing citizen or neighborhood interest on an application that is being considered for action before the County's Hearing Examiner, Planning Commission or the County Council.

### Vision, Goals and Policies

#### Vision Statement

The economy of Birch Bay Community has increased considerably over the years. Tourists demand for hotel and motel space has created additional jobs. Cherry Point continues to be an important employment center providing jobs to many of the Community's residents. High-tech industry, particularly light manufacturing, has discovered Birch Bay. Small plants and operations have located in commercially zoned areas throughout the Birch Bay Community, providing year-round family wage jobs. The

## ECONOMIC DEVELOPMENT

additional population, jobs in hotel industry, high-tech, and light manufacturing, all have created additional jobs in the service industry, such as restaurants, convenience and specialty stores, personal services operations, and services to businesses and residences.

### **Goals and Policies**

- Goal EC 1: To continue the commitment to Birch Bay's primary economic resource – recreation and tourism commerce – while maintaining a commitment to the residential character of the community.
- Goal EC 2: To coordinate economic development with environmental, resource, and other comprehensive land use and open space policies and measures to enhance the community's overall quality of life.
- Goal EC 3: To be committed to providing family-wage jobs within the area and to effectively market Birch Bay as a place for businesses that complement the residential and recreational character of the community.
- Goal EC 4: To ensure adequate infrastructure to support existing and future business development and evolving technology.
- Goal EC 5: To support increased public/private partnering among all entities involved with economic development.

## **Strengths and Weaknesses**

The strengths of Birch Bay can be summed up as being: 1) natural beauty; 2) choice of recreational opportunities; 3) proximity to population and employment centers; and 4) adequate utility services.

When it comes to identifying weaknesses, the most often cited weakness is the lack of community identity, followed by lack of job opportunities, lack of a common community vision, lack of thorough long-range planning, and inadequate level of government services. Traffic congestion and lack of adequate public transportation are beginning to emerge as deficiencies that need to be addressed. A summary of strengths and weaknesses is presented in Table 13-12.

**Table 13-12**  
**Strengths and Weaknesses**

<b>STRENGTHS</b>	<b>WEAKNESSES</b>
<p><b><u>Natural Beauty</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Birch Bay, a beautiful natural phenomena</li> <li><input type="checkbox"/> Beautiful sunsets</li> <li><input type="checkbox"/> Warm water swimming at summertime</li> <li><input type="checkbox"/> Abundance of marine life</li> </ul> <p><b><u>Choice of Recreational Opportunities</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Beach related recreation</li> <li><input type="checkbox"/> Swimming, boating, fishing,</li> <li><input type="checkbox"/> Shellfish harvesting</li> <li><input type="checkbox"/> Observance of marine life</li> <li><input type="checkbox"/> Beach combing</li> <li><input type="checkbox"/> Camping, hiking, bicycling</li> <li><input type="checkbox"/> Horseback riding</li> <li><input type="checkbox"/> Wildlife observance</li> <li><input type="checkbox"/> Golfing</li> </ul> <p><b><u>Proximity to Population Centers</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Cultural events in Vancouver and Seattle</li> <li><input type="checkbox"/> Access to specialized health care</li> <li><input type="checkbox"/> Access to specialized professional services</li> <li><input type="checkbox"/> Employment opportunities</li> </ul> <p><b><u>Utility Services</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Adequate water and sewer services</li> <li><input type="checkbox"/> Adequate school and fire services</li> </ul>	<p><b><u>Lack of Community Identity</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lack of sense of community</li> <li><input type="checkbox"/> Lack of unified voice</li> <li><input type="checkbox"/> Lack of visible leadership</li> </ul> <p><b><u>Lack of Job Opportunities</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lack of jobs closer to home</li> <li><input type="checkbox"/> Lack of job choice</li> <li><input type="checkbox"/> Inability to change employers</li> </ul> <p><b><u>Lack of Common Community Vision</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lack of common vision</li> <li><input type="checkbox"/> Diversity of opinions on future of BB</li> </ul> <p><b><u>Lack of Long-Range Planning</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lack of long-range or community plan</li> <li><input type="checkbox"/> Development decisions are ad hoc</li> </ul> <p><b><u>Inadequate Level of Government Services</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Lack of stormwater management</li> <li><input type="checkbox"/> Long police services response time</li> <li><input type="checkbox"/> Lack of code enforcement</li> </ul> <p><b><u>Traffic and Transportation</u></b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Two lane rural roads serving urban traffic</li> <li><input type="checkbox"/> Traffic congestion</li> <li><input type="checkbox"/> Traffic accidents</li> <li><input type="checkbox"/> Lack of public transportation</li> </ul>

## Action Strategies

Action strategies are action oriented statements, when implemented, will lead to the achievement of a particular vision. Action strategies have not been prioritized, meaning that a particular action strategy does not have to be implemented before another.

The Birch Bay Community Plan Steering Committee, itself, does not have the means of carrying out most of the identified action strategies. Implementation is left to governmental entities such as Whatcom County, Port of Bellingham, Birch Bay Water and Sewer District, Fire District 7 and 13, Blaine School District, and others. The role that the Birch Bay Community Plan Steering Committee can play is to urge these governmental entities to follow through with one or more of the identified action strategies. If the listed action strategies are implemented, the vision statement comes close to being achieved.

1. The Birch Bay community should commission an economic analysis to determine the amount of retail dollars spent outside the area. This information, disseminated through the Chamber of Commerce would guarantee an input in investing in retail and restaurant services.
2. The Chamber of Commerce should take the lead in advertising on the Internet and throughout the media the opportunities for retail services and restaurants in Birch Bay community.
3. The Birch Bay Chamber of Commerce should prepare a sales packet to promote the area for a major grocery store.
4. The Port of Bellingham and Whatcom County EDC should promote the area for investment in high-tech industries.
5. The Birch Bay Community Plan Steering Committee should recommend to Whatcom County that the Resort Commercial zoning (RC) Chapter in the Zoning Code be modified to allow mixed use development where 1/3 or 33 percent of the floor area of a permitted multi-family residential structure can be constructed as commercial space, ranging from retail to services to office uses.

## **Chapter 14**

# **PUBLIC EDUCATION**

The Birch Bay community planning area is being serviced by the Blaine and Ferndale School Districts. The boundary between the two School Districts runs north and south about one half mile west of the Kickerville Road. West of that boundary is the Blaine School District and east of that boundary is the Ferndale School District.

## **Blaine School District**

The Blaine School District operates five schools. Four schools, a primary, an elementary, middle and a high school are located on a unified school campus in the City of Blaine. A primary school with grades kindergarten through second grade is located at Point Roberts. Blaine School District students are being bussed to the unified school campus site in Blaine. The grade configuration at the Blaine School District is that the primary school consists of grades kindergarten through grade two, the elementary school consists of grades three through grade five, the middle school consists of grades six through eight, and the high school consists of grades nine through twelve. Table 14-1 shows the current and projected student population at the Blaine School District.

**Table 14-1**  
**Current and Projected Student Population**

<b>Grade Level</b>	<b>2000</b>	<b>2012</b>
K-2	469	720
3-5	491	655
6-8	475	594
9-12	452	622
Total	1,887	2,591

The citizens in the Blaine School District in 2001 passed a \$19.7 million bond issue to add classroom space, modernize old and antiquated facilities and generally improve the safety and efficiency of the operation on the school campus in Blaine. The student population projections indicate that by year 2012, there will

be an additional 704 students. At current Blaine School District standards that amounts to two new schools. The unified school site at Blaine is already built out and any new school to be constructed needs to be located outside the unified campus. Due to its high volume of student generation, Birch Bay area is a likely candidate for an elementary (K-5) school site.

The Birch Bay Community is very much interested in having an elementary school located in the Birch Bay area. About one-half of the enrollment at the Blaine School District is made up of students coming from the Birch Bay area. A desired option is to locate and develop in the Birch Bay area, a community center consisting of an elementary school, a park and recreation facility, and possibly a library and other civic buildings such as a community center building, etc. If the Birch Bay area were to incorporate, the community center complex may also include a city hall and other municipal services buildings.

### Ferndale School District

As stated earlier, only a very small part of the Birch Bay Community planning area is in the Ferndale School District. That area is now and is proposed to remain in rural development use. Being a rural area with low density development the area generates very few students. Therefore, the Birch Bay's impact on the Ferndale School District is negligible or very low.

### Desired Education Future

#### Vision Statement - Public Education

**Education.** *Birch Bay now has a school. The Blaine School District has built an elementary school in the area and has named it Birch Bay School. It is centrally located, adjacent to other civic buildings and recreational facilities. The school is a high-tech center, not only for elementary students but also for adults taking evening courses in arts and other humanities and improving their internet skills. The school is also equipped with a sizable auditorium and meeting rooms, functioning as an after-school community center. Fiber optic cable service that was a rarity a few years ago can now be found spread throughout the Community.*

### **Public Education – Goals**

- Goal ED 1: To work with the Blaine School District to locate an elementary school in Birch Bay.
- Goal ED 2: To foster educational opportunities for all ages and interests.
- Goal ED 3: To work cooperatively with other agencies, especially the City of Blaine, the Blaine School District and Fire Districts 7 and 13 in providing facilities and programs relating to both community education and health.

### **Action Strategies**

1. Encourage the Blaine School District to purchase a school site in the Birch Bay Community planning area.
2. Encourage the Blaine School District to purchase a 40 acre site in anticipation that about 25 acres of this land will be acquired and developed into a community center use.
3. As an option, the Blaine School District may want to purchase outright 15 acres for an elementary school site and purchase a long-term option to acquire the rest.
4. The location of the proposed elementary school site or community center school site should take into consideration the updated Birch Bay Community Plan land use and transportation layouts.



## **Chapter 15**

# **PUBLIC HEALTH AND SAFETY**

## **Health Care**

### **Existing Health Care Facilities**

Today, there is only one health care facility located at Birch Bay. The facility is a clinic located at the intersection of the Birch Bay-Lynden Road and Harborview Road. It is open during the business hours, during the work week.

Emergency medical services are accessed through the enhanced 911 system and provided by three fire departments. Both Fire District #7 and #13 operate emergency medical aid services. District #7 serves from the Bay Road south and District #13 serves from the Bay Road north. Each District provides Certified Emergency Medical Technicians and First Responders. Whatcom Medic One Ambulance Service provides paramedic ambulance transport. This service is provided by the Bellingham Fire Department. St. Joseph's hospital provides a licensed and verified level II Trauma Center and is listed in the top 100 facilities in the United States for Cardiac Care services.

### **Adequacy of Existing Health Care Facilities**

The existing health clinic seems to serve its customers well. With the increased population, additional clinics or doctor's offices need to be located in the area. The elderly population makes up a significant part of the total area population. The health care needs of the elderly become more important every day. A nursing home or a long-term elderly care facility probably could succeed in the area. With the growth of a community with increasing numbers of retired citizens comes an increasing number of medical emergencies, and need for preventative health care.

## **Proposed Improvements in the Health Care System**

Since most health care services are provided by for-profit organizations, the marketplace will determine what type of health care facilities are to be located in the Birch Bay area. If the market for a nursing home or long-term care facility exists, a facility will be built.

Due to the increasing number of requests for emergency medical services the fire departments serving Birch Bay have placed increased emphasis on improving the level of service provided. A key element to the success of these programs is funding. Special attention to property tax reduction legislation should be considered, as a loss of funding would have a negative impact to the level of service provided.

## **Fire Protection Services**

In order to protect life and property, and to provide the best fire protection possible in the neighborhoods, fire districts carefully plan the location of fire stations. In accordance with standard fire protection practices, fire stations are generally located with respect to existing and anticipated land uses and densities, the physical environment, fire flow requirements and desired minimum response time. As a result, the dwellings in the Birch Bay community are within two to five miles of district fire stations. Figure 15-1 shows the boundaries of Fire District 7 and the Consolidated Fire District 13.

Fire protection services are coordinated within the jurisdiction of each fire district. The districts plan fire station locations, purchase firefighting apparatus and recruit and train volunteer firefighters from within the Birch Bay area. Volunteer firefighters reside within fire district boundaries and attend monthly meetings. In addition, each firefighter has the opportunity to receive emergency medical training (EMT) and Basic Life Support Training (BLS). Fire District #7, and #13 also have career firefighters. The provisions of emergency aid protection in each district are provided oversight by the Washington State Department of Health Office or Emergency Medical Services and Trauma Prevention. Each fire district provides program management and follows the Patient Care Procedures and Protocols, developed locally.

Figure 15-1  
Fire District Boundaries

## **Fire District 7**

**Existing Facilities and Services.** Fire District 7 serves a 75 square mile area in Whatcom County including the city of Ferndale and the southern part of the Birch Bay Community Planning Area. Fire District 7 serves the area south of the Bay Road.

The District is a combination paid and volunteer fire department. There are currently 18 paid employees which include a fire chief, Administrative Assistant, Office Assistant, Training Officer Lieutenant, Maintenance Officer Captain, three Company Officer Lieutenants, and nine fire fighters. The District also has 78 volunteer officer/fire fighters posted to six stations.

The District owns and operates three staff vehicles, seven engines, three rescue/pumpers, two aid ambulances, two water tenders, one utility Re-Hab, one utility service and three utility units to support requests for fire and aid services from the general public.

The District operates six stations. The two fire stations serving the Birch Bay community are Station 4 at Point Whitehorn and Station 2 at the Kickerville and Brown Road intersection. The Whitehorn Station is equipped with one Rescue/Aid pumper and one pumper. The Kickerville/Brown Road Station is equipped with one Rescue/Aid pumper, one water tender, and one pumper.

In the year 2000, the District responded to 1252 alarms. Of the total, 313 alarms were for fire, 813 for emergency medical services, 88 for hazardous conditions, and 38 for other purpose. The average District wide response time was 6.19 minutes.

Within the Birch Bay Community Planning Area, the District responded to 23 alarms with an average response time of 7.19 minutes.

**Standards.** The gold standard for successful emergency medical services is four to six minute response times for aid services and 15 to 20 minutes for ambulance services. EMS system response times within this time period have been proven to lead to an increased number of lives being saved in incidents in which time is critical. Response for fire emergencies is also time dependent and require larger numbers of personnel and fire suppression equipment. Fire District 7 responds between seven to eight minutes. Considering the voluntary nature of the district operation and the

location of fire stations these response times are not likely to improve. To shorten the response time requires the manning of the fire station at Point Whitehorn on a round the clock basis. The cost of such an operation is significant.

### **Consolidated Fire District No. 13**

**Existing Facilities and Services.** Fire District 13 serves all of the Birch Bay community planning area north of Bay Road. They also serve the City of Blaine, as well as the Custer, and Haynie areas. The Fire District provides fire protection, emergency medical, and hazardous materials response services. Fire District #13 has entered into a Cooperative Interlocal Agreement with Fire District #3, and #5 that has resulted in the formation of the North Whatcom Fire & Rescue Services (NWFRS) organization. The NWFRS organization serves a 165 square mile total area. This agreement allows enhanced training programs and more depth in staffing, volunteers, and resources than would otherwise be possible.

North Whatcom Fire & Rescue Services organization is a combination paid and volunteer fire department. There are currently 28 paid employees, which include a fire chief, Assistant Fire Chief, 3 Division Chiefs, Training Captain, Volunteer Resource Coordinator, Finance Manager, 2 Administrative Assistants, two apparatus maintenance technicians, 1 Emergency Medicine Physician, five Career Company Officer Lieutenants, and nine Career Firefighters. The NWFRS organization also has 165 volunteer officer/fire fighters posted to 10 fire stations.

North Whatcom Fire & Rescue operates 7 staff vehicles, 14 engines, 12 aid ambulances, 5 water tenders, 1 Re-Habilitation unit, one Breathing Air response unit and 5 utility units to support requests for fire and aid services from the general public.

Fire District 13 operates 5 stations. The 3 fire stations serving the Birch Bay community are Station 1 at 4581 Birch Bay-Lynden Road, Station 2 located in Custer, and Station 4 located in Blaine. The Birch Bay Station is staffed 24 hours a day with career Firefighters/EMTS and is also served by 30 volunteer members participating in a sleeper program. The Birch Bay Station is equipped with 2 Rescue/Aid pumpers, 1 ladder truck, and 1 BLS Ambulance Aid vehicle. The Custer Station is equipped with one Rescue/Aid pumper, 1 water tender, and 1 BLS Ambulance Aid vehicle; the Blaine station has 2 Rescue/Aid pumpers and 1 BLS Ambulance.

## PUBLIC HEALTH AND SAFETY

In the year 2002, the District responded to 1038 alarms. Of the total, 178 alarms were for fire, 686 for emergency medical services, 27 for hazardous conditions, and 147 for other purposes.

Within the Birch Bay Community Planning Area, the District responded to 403 alarms with a Fractal response time utilizing a 90% standard of 6 minutes or less. In the Semiahmoo area the Fire District responded to 40 alarms with a Fractal response time utilizing a 90% standard of 7 minutes and 30 seconds or less.

**Standards.** The gold standard for successful emergency medical services is four to six minute response times for aid services and 15 to 20 minutes for ambulance services. EMS system response times within this time period have been proven to lead to an increased number of lives being saved during medical emergencies in which time is critical. Response for fire emergencies is also time dependent and require larger numbers of personnel and fire suppression equipment. Fire District #13 responds between five to six minutes. To shorten the response time the fire District has career and volunteer firefighters and emergency medical technicians manning the fire station in Birch Bay 24 hours a day.

**Proposed Expansions and Improvements.** Increased population, particularly in the Birch Point area will necessitate the manning the fire station at Semiahmoo on a 24-hour basis. Additional equipment will also need to be brought to the station to maximize its effectiveness. These costs will be born by taxes paid by the growing population. The Birch Bay station now being utilized as a manned fire station must under go substantial remodeling in the future to house firefighters and EMTs.

## Police Services

Police services to the residents and business of the Birch Bay area are provided by the Whatcom County Sheriff's Department. The Sheriff's Department headquarters are located in the Whatcom County courthouse in Bellingham. Table 15-2 presents overall Sheriff's Department calls in Whatcom County from 1996 through 2000. The statistics in the table indicate that the incidents calls have decreased slightly over the last five year period.

**Table 15-1**  
**Whatcom County Sheriff's Office Calls for Service**

<b>Year</b>	<b>Total Calls</b>
2000	24411
1999	24759
1998	26738
1997	25702
1996	25957

Table 15-3 presents the incidence statistics for Birch Bay area from 1996 through 2000. The incidence statistics in the table show that the number of incidences is decreasing.

## **Standards**

Standards for police services are measured in terms of number of uniformed police officers per 1,000 population, the response time to an emergency call, and the number of incidences per 1,000 population. To increase the standards beyond what exists today, the Whatcom County Sheriff's office would have to establish a police precinct office in the Birch Bay area and man it around the clock with five uniformed officers. This level of service would approach the level of municipal police services.

**Table 15-2**  
**Birch Bay Police Incident Reports 1996 - 2000**

<b>Year</b>	<b>High Crimes</b>	<b>Traffic</b>	<b>Domestic</b>	<b>Misc.</b>	<b>Total</b>
2000	126	128	141	1050	1445
1999	147	154	150	1092	1543
1998	200	187	141	1289	1817
1997	142	150	116	1112	1520
1996	180	180	121	1046	1527

Source: Whatcom County Sheriff's Office

## **Proposed Improvements**

To greatly improve police presence in the area.

## **Industrial Safety**

Living near or next to industrial areas poses some potential safety problems. Often hazardous chemicals and other hazardous chemicals are transferred to industrial sites to be manufactured into consumer products, such as crude oil to gasoline, etc. Other hazardous materials are used in manufacturing process, such as butane for heating purposes. Industrial operators, over the years, have developed safety procedures that minimize potential accidents leading to hazardous conditions for both the workers at the site and to those living and working in the near-by area. Most hazardous industrial operations are regulated and monitored by the federal, state and local governments.



## **Desired Health and Safety Future**

### **Vision Statement - Public Health and Safety**

Crime that periodically raises its ugly head in all communities has subsided considerably in the Birch Bay Community as a result of crime prevention education and increased police presence. Further, the Community has matured, neighbors know their neighbors and neighborhood crime watch programs have caught on. Fire service has also improved. Fire and emergency medical response time has decreased considerably due to having constructed additional fire stations and staffing them with full-time fire and emergency medical service personnel. As a result of improved fire services, the fire insurance rates on residential structures have decreased significantly. Fire and police safety seminars are being conducted throughout the community on a regular basis.

### **Goals - Public Health and Safety**

- Goal PS 1: To achieve and maintain a community feeling of living in a safe and secure environment.
- Goal PS 2: To reduce fire and police response times.
- Goal PS 3: To promote and encourage citizen involvement in such things as neighborhood watch programs and emergency awareness.
- Goal PS 4: To achieve and maintain high standards in providing normal and emergency medical treatment.
- Goal EH 1: To work cooperatively with other agencies, especially the City of Blaine, the Blaine School District and Fire Districts 7 and 13 in providing facilities and programs relating to both community education and health.

## **Action Strategies**

1. Amend the zoning code to allow (outright) medical service facilities to be located in Resort Commercial district.

## **PUBLIC HEALTH AND SAFETY**

2. Promote the development of a nursing home or long-term care facility in the Birch Bay area.
3. Continue to work with Fire Districts No. 7 and 13 and assist them in making improvements when warranted by increased population growth and increased commercial development.
4. Assure adequate fire flow in the water system for fire-fighting purposes.
5. Work with the Whatcom County Sheriff's Department to bring more uniformed patrol officers to the area during critical periods.
6. Promote the County Sheriff's enforcement of speed limits on Birch Bay Drive and the provision of safety measures such as pedestrian crossings and safety warning signs.
7. Identify a site and local funding source for a future police station.

## Chapter 16

# GOVERNANCE

## Introduction

This chapter examines two future governance options for Birch Bay. One option is to incorporate Birch Bay as a municipal corporation. The other option is to annex all or parts of Birch Bay to the City of Blaine. The Growth Management Act states that "it is appropriate that urban government services be provided by cities, and urban government services should not be provided in rural areas." Consistent with this goal, it is desirable that Birch Bay will become a city or annex to a city as soon as this is economically feasible, as cities are best suited to provide the services that are needed in an urban area. Until incorporation or annexation is feasible, Birch Bay will remain an unincorporated urban area of Whatcom County. In the interim, some governmental service improvements can be achieved through such actions as activating the now dormant Northwest Parks and Recreation District, adoption of park and traffic impact fees, or the creation of a Road Improvement District or Stormwater Utility District.

The incorporation alternative and the annexation alternative have so many measures with differing weights that it is impossible to say categorically that one alternative is superior to another. Different people put different weights on different measures and reach opposing conclusions. Therefore, this chapter does not draw a conclusion that one alternative is superior to another. It leaves that determination to be made by the reader.

This chapter does not attempt to evaluate the qualitative aspects of incorporation or annexation. It deals primarily with measurable aspects such as government revenues and costs. Costs are broken down to government operations costs and capital investment costs. The chapter concludes by describing the procedures for incorporation and annexation. In either case, to implement the incorporation or annexation, the affected people of Birch Bay must vote and approve the proposal by a simple majority vote.

## Incorporation

### Area

For the purposes of this study, the area for incorporation is the recommended Birch Bay urban growth area as shown in Figure 8-7. It includes all of the current short-term and long-term Birch Bay urban growth area. Further, it includes 100 acres that are outside the current Birch Bay urban growth area, east of Blaine Road in the vicinity of Alderson and Arnie Roads. The Birch Bay incorporation study area amounts to approximately 6,900 acres of land.

### Population

The population of the incorporation study area or the recommended urban growth area in 2000 amounted to about 4,390 persons. By 2002, the population has grown to about 4,770. The 2022 forecast of population in the incorporation study area or the recommended urban growth area amounts to about 9,619 persons.

### Estimated Revenue and Expenses

If Birch Bay were to incorporate as a municipality in 2002, it would generate a certain amount of revenue and incur expenditures. The revenue vs. expenditure estimates are shown on the following page in Table 16-1. The revenue estimates reflect the revenues a municipality, the size of Birch Bay (population 4,770), would be able to generate from regular or entitlement sources. The expenditure estimates are based on the assumption that the new municipality would provide the level of municipal services that the area residents are getting now from Whatcom County.

As illustrated in Table 16-1, the revenues amount to \$2,738,237 and the expenditures amount to \$2,201,150, leaving the potential new city with \$541,452 for non-operational expenditures. These non-operational expenditure funds would need to be expended on capital improvements. Capital improvement needs and costs are outlined in Chapter 16.

A more detailed analysis of revenues and expenses would be needed to develop a budget for the future City of Birch Bay and determine the feasibility of incorporation.

# GOVERNANCE

**Table 16-1**  
**Estimated Revenues and Expenses - Incorporated Birch Bay**

<b>Parameters</b>	<b>2002 Dollars</b>
2002 Estimated population	4,770
Taxable assessed value for year 2002 taxes	\$440,175,005
Levy rate per \$1,000 of assessed value	\$1.60
Estimated property tax delinquency rate	1.0 %
<b>Estimated Revenues</b>	<b>2002 Dollars</b>
Property taxes, regular levy	\$704,280
Retail sales tax	465,457
Liquor excise tax	15,836
Liquor profits	26,998
Unrestricted gas tax	73,124
Restricted gas tax	34,201
Criminal justice revenue	859
Real estate excise tax	178,951
Building permit and plan review revenue	305,000
Business licenses fees	15,000
Fines and forfeitures	202,000
Surfacewater management assessment	177,000
Hotel-motel tax	190,000
Impact fees	135,000
Utility tax revenue	62,633
Cable TV franchise fee	28,048
Community development block grants	14,310
Gambling tax	9,540
State and federal grants	100,000
<b>Total Estimated Revenue</b>	<b>\$2,738,237</b>

**Table 16-1**  
**is continued on the following page**

## GOVERNANCE

**Table 16-1 Cont.**  
**Estimated Revenues and Expenses - Incorporated Birch Bay**

<b>Estimated Expenses</b>	<b>2002 Dollars</b>
City council and mayor	\$33,400
City manager	123,350
City attorney	80,000
Municipal court	202,000
City clerk	146,400
Community and economic development	383,000
Finance department	191,000
Police department	406,000
Public works department	436,000
Operational contingency	100,000
Reserve fund	100,000
<b>Total Estimated Expenses</b>	<b>\$2,201,150</b>
<b>Revenue Less Expenses</b>	<b>\$537,087</b>

### Assessed Value

The year 2001 taxable assessed value is the value on which 2002 taxes in the unincorporated area would be levied. The 2001 taxable assessed value in the Birch Bay incorporation study area, as reported by the Whatcom County Assessor, amounts to \$431,140,005. About 49 percent or \$210,982,845 is in land and \$220,157,160 is in improvements.

Public utilities properties, such as electric light and power companies, telephone and telegraph companies, railways and other transportation companies, are subject to property tax levies. The total assessed value of public utilities in Whatcom County in 2001 amounted to \$442,851,475 or 4.0 per cent of its total assessed taxable value of \$11,103,838,090. Taking a conservative approach, the Birch Bay incorporation area share of public utility assessed value is estimated at 2.0 per cent and amounts to \$8,772,000.

The total taxable assessed value in the Birch Bay incorporation study area amounts to \$440,175,005, which is the taxable assessed value of

land and improvements (431,403,005) plus the Birch Bay incorporation area share of the County's public utility taxable assessed value (\$8,772,000). The Birch Bay incorporation study area's share of the County's total assessed valuation is 4.0 percent.

The Taxable assessed value for the Birch Bay incorporation study area was determined by the Whatcom County Planning and Development Services Department using Whatcom County Assessors records and the GIS mapping system.

### **City Levy Rate**

The city levy rate of \$1.60 per \$1,000 of assessed value represents the maximum regularly allowed by Washington law for a city that does not provide its own library or fire protection services. If a city were to provide its own library and fire services the \$1.60 levy could be increased by \$2.00 to \$3.60 per \$1,000 assessed value.

### **Property Tax Delinquency Rate**

Not all property taxes are collected. Some property taxes go unpaid in one year but are paid the next year. Generally, cities collect 99 per cent of all property taxes. Only 1 percent remains uncollected, resulting in a property tax delinquency rate of 1.0 per cent.

### **Property Tax Revenue**

The estimated property tax revenue is calculated by combining the estimated taxable assessed value of \$440,175,005 by the city levy rate of \$1.60 per \$1,000 of taxable assessed value and the assumed property tax delinquency rate of one per cent. The total property tax revenue is estimated to amount to \$704,280.

### **Sales Tax Receipts**

State law allows cities to levy a one per cent sales tax. The first half per cent is a base half and the second half per cent is optional. The sales tax receipts estimate is based on the assumption that the city would levy both

## GOVERNANCE

half-percents allowed by law. The Washington State Department of Revenue collects the sales tax on behalf of cities and keeps one per cent of the one percent to cover its administrative and collection costs. Whatcom County is eligible to receive 15 percent of the one percent. In total, a new city in Whatcom County, therefore, would receive 0.84 per cent of gross retail sales.

Sales tax is a value added tax that is added on a percentage basis to the sales price of tangible personal property and many services purchased by the consumer. Purchase of groceries and prescription drugs are exempt from sales tax. Sales tax is also applied to such charges as telephone service, cable television, etc. Further, sales tax is also added to construction or improvement of existing buildings, including labor and services provided throughout the process.

To estimate sales tax generated in any defined area in unincorporated Whatcom County, or any other county, is a very difficult task. The Washington State Department of Revenue accounts for and reports sales tax collections by a municipality and by the remainder of unincorporated territory in a county. In 2001, Whatcom County's unincorporated population amounted to 75,682. The Department of Revenue accredited \$6,674,795 in sales tax revenue to the Whatcom County unincorporated area. The per capita sales tax amounted to \$88.20. Applying this rate to the number of persons in the Birch Bay incorporation area would generate sales tax revenue amounting to \$420,714. In comparison, City of Blaine's sales tax revenue in 2001 amounted to \$607,191. Dividing this number by the number of persons (3,855) results in per capita sales tax revenue for the City of Blaine amounting to \$157.51. The per capita sales tax revenue in Whatcom County, less the City of Bellingham, amounts to \$97.58. Using this rate to calculate the sales tax revenue for the Birch Bay incorporated area amounts to \$465,457. Comparative sales tax revenue collected in municipalities in Whatcom County during the year 2001 is shown in Table 16-2.



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**Table 16-2**  
**Sales Tax Revenue**

<b>Jurisdiction</b>	<b>2001 Population</b>	<b>Total Sales Tax</b>	<b>Per Capita Sales Tax</b>
Bellingham	68,890	\$12,851,923	\$186.56
Blaine	3,855	607,191	157.51
Everson	2,050	123,129	60.06
Ferndale	8,925	871,960	97.70
Lynden	9,285	1,503,277	161.90
Nooksack	918	42,715	46.53
Sumas	995	101,499	102.01
Unincorp. Whatcom County	75,682	6,674,795	88.20
WC less Bellingham	101,710	9,924,566	97.58

Source: Washington State Department of Revenue

### State Liquor Excise Tax

The Washington State Department of Revenue distributes a share of the state collected liquor excise tax to cities on a per capita basis. To receive these funds, cities are required to spend at least 2 per cent on approved alcoholism and drug addiction prevention programs. The estimated per capita state liquor excise tax distribution in 2002 is \$3.32. The state liquor excise tax in the Birch Bay incorporation area is estimated to generate \$15,836 in the year 2002.

### State Liquor Profits Revenue

The Washington State Department of Revenue also distributes liquor sales profits to cities. The distribution is on a per capita basis. The per capita rate in 2002 amounts to \$5.66. The amount of revenue generated in the Birch Bay incorporation area amounts to \$26,998.

### Unrestricted Gas Tax

In Washington State, the State collects all the gas tax. Some of it is shared with municipalities. The "unrestricted" portion of the shared gas tax

is directed to street and road maintenance. The "restricted" portion is directed to be deposited in an arterial street fund and to be used for street or road construction. The per capita "unrestricted" gas tax in 2002 amounts to \$15.33 and the total allocation to the Birch Bay incorporation area amounts to \$73,124.

### **Restricted Gas Tax**

The State allocated "restricted" gas tax funds must be assigned to an arterial street fund and be used for street construction. The per capita allocation in 2002 amounts to \$7.17. The Birch Bay incorporation area share in 2002 amounts to \$34,201.

### **Criminal Justice**

The portion of criminal justice revenues that came from the motor vehicle excise tax was repealed by Initiative 695. However, Referendum 49 provided for a contribution from the state general fund every year so the repeal of the motor vehicle excise tax did not completely eliminate criminal justice funding. The per capita estimate for year 2002 is \$0.18. The amount for the Birch Bay incorporation area amounts to \$859.

### **Real Estate Excise Tax**

Municipalities are permitted to levy real estate excise tax (REET) on all real estate sales within the municipal boundary. A municipality that is required to plan under the Growth Management Act can levy two 0.25 per cent pieces, totaling 0.5 per cent on all real estate sales. The amount of REET collected fluctuates from year to year and is dependent on the level of real estate activity. Looking at 2001 REET collections in Auburn and Renton in King County and Ferndale and Lynden in Whatcom County, REET generated anywhere from \$227 to \$520 per \$1 million assessed taxable value. For the Birch Bay incorporation area, REET is estimated at \$400 per \$1 million assessed taxable value, resulting in 2002 REET revenue amounting to \$178,951.

### **Building Permit and Plan Review**

With incorporation, planning and building regulation transfers from Whatcom County to the new city. Revenues from plan review and building permit review in the Birch Bay area have been significant and are collected by the County. The new city is empowered to establish building permit and plan review fees. Building permit fees are more or less driven by the Uniform Building Code which most cities and counties, in the State of Washington, have adopted.

This analysis makes the assumption that the new city will adopt a "full cost recovery" policy, meaning that all building inspection and plan review costs will be recovered in full from building permit and plan review fees. Therefore, the revenue from building permits and plan review activities is estimated to amount to \$305,000.

### **Business License Fees**

Municipalities in the State of Washington are empowered to levy a business and occupation (B&O) tax. B&O tax is levied as a percent on gross receipts of a business or profession. Very few cities in the State of Washington do impose this tax, due its nature that it levies taxes on gross receipts and not on profit. Most cities have opted for a lesser tax and are imposing a business license fee. Most business license fees are levied on a graduating scale. Large businesses, measured in terms of gross income or number of employees pay a slightly higher business license fee than a person working out of his or her home as a home based business. The revenue estimate from business licenses amounts to about \$15,000.

### **Fines and Forfeitures**

Administration of a municipal court system generates revenue derived from fines and forfeitures. A newly created city can operate their own municipal court or they can contract out municipal court activity to another municipality such as Blaine or continue with the Whatcom County court system. A municipal court system can be self supporting, meaning that the cost of administering the court system is paid entirely out of collected fines and forfeitures. The estimated revenue derived from fines and forfeitures in Birch Bay is estimated to amount to \$202,000.

### Surfacewater Management Assessment

Surfacewater management has been and continues to be a critical concern to the residents of Birch Bay. If and when the Birch Bay area were to incorporate, a surfacewater management program needs to be put in place. The program should include the construction and maintenance of surfacewater management facilities such as detention ponds, culverts, ditches, catch basins, street drains, etc. It would also include street sweeping. A fee based revenue program should be put in place that charges fees based on the amount of impervious surface. A basic charge of \$3.00 per housing unit per month would generate an initial startup fund of \$177,000 per year.

### Hotel-Motel Tax

To impose a hotel-motel tax is a delicate and complex problem. Over the years, court rulings and the legislature have changed the hotel-motel tax application regulations. The use of the hotel-motel tax generated revenues are limited to: "build and/or operate any facility that supports tourism or accommodates tourist activity." The phrase "supports tourism or accommodates tourism" also means the expenditure for salaries of city employees for promoting tourism. For a municipality to levy a hotel-motel tax, it must set up a "Lodging Tax Advisory Committee." The Committee has a statutory role to play prior to a city levying the tax.

The law allows cities to impose a "basic" two per cent tax on all charges for furnishing lodging at hotels, motels, and similar establishments (including bed and breakfast and RV parks) for a continuous period of less than one month. This tax is taken as a credit against the 6.5 per cent state sales tax. Under this arrangement, a patron pays a combined retail sales tax and the hotel-motel sales tax that is equal to the retail sales tax in the jurisdiction. In addition, cities may levy an additional tax of up to two percent, for a total rate of four per cent. This "special" tax is not credited against the state sales tax. Therefore, if a city were to levy this additional two per cent tax, the total tax on the lodging bill would increase by two per cent. For the potential new city of Birch Bay, the four per cent hotel-motel tax would generate about \$190,000.

### Impact Fees

Impact fees are charges imposed on new development that mitigate the impact of the proposed development on the infrastructure. Impact fees can be imposed for school construction, parks, street and roads, and municipally owned fire operations. Impact fees can be expended only on capital facilities that alleviate the impact caused by the proposed development and must be expended or encumbered within a six year period of collection. Impact fee collections must be based on an ordinance and must be accounted in a separate account for each project.

A new municipality of Birch Bay could only levy impact fees for schools, parks and streets/roads. Since there is no municipal fire department, the new city could not impose fire impact fees. School impact fees, if collected, would be turned over to the Blaine School District. With the consent of the school district, the city could retain a small part of the school impact fee to recover administrative costs. The estimated amount of parks and streets/roads impact fees collected in a new city of Birch Bay amounts to \$135,000.

### Utility Tax

A city may levy utility taxes on the gross operating revenues earned by private utilities from operations within the boundaries of a city. Utilities on which taxes may be levied include electric, water, sewer, stormwater, gas, telephone, cable TV, and steam. A city may not tax any income earned by another city's utility or a special district (Birch Bay Water and Sewer District) that operates within its boundaries. The tax rate is limited to six per cent for electric, gas, steam and telephone utility services. However, a municipality may ask the voters to approve a higher rate than six per cent. There is no tax rate limitation on water sewer and stormwater utilities. Any rate higher than six per cent on cable TV stands a good chance of running afoul with the Cable Communications Policy Act of 1984. Cable TV utility tax has been excluded from this calculation and will be treated separately.

A number of recently incorporated municipalities have adopted a utility tax that nets the amount of tax revenue equal to the difference between the \$1.60 and \$1.74 per 1,000 assessed taxable value of property. Currently, residents of Birch Bay incorporation study area pay \$1.74 per 1,000 taxable value for Whatcom County road purposes. With the incorporation, this \$1.74 per 1,000 assessed value is replaced by \$1.60 per 1,000 assessed value dedicated for municipal purposes. To keep the tax

revenues the same, the reduction of tax revenue generated by \$0.14 per 1,000 assessed value is replaced by the utility tax. Applying the \$0.14 per 1,000 assessed taxable value in the Birch Bay incorporation study area generates a revenue of \$62,633.

### **Cable TV Franchise Fee**

Under Washington State statutes, counties are not allowed to impose utility taxes on cable TV but they are allowed to impose franchise fees limited to five per cent. A five per cent utility tax in incorporated Birch Bay would generate about \$28,048, which is based on a rate of \$5.88 per capita. This per capita amount is based on research conducted in King County (Auburn, Des Moines, Federal Way and Kent) to determine the five per cent franchise fee.

### **Community Development Block Grants**

Community Development Block Grant funds are federal funds that are passed through to counties and entitlement cities through the State Office of Community Development. The grant funds are earmarked to be expended on providing assistance to low and moderate income groups. Usually, the funds are expended on providing the low and moderate income groups with housing assistance. The amount of money a new city of Birch Bay may receive from Whatcom County is about \$3.00 per capita per year. A city usually waits six to eight years and then gets a more sizable grant. The amount of Community Development Block Grant funds that the new city Birch Bay would receive is estimated at \$14,310.

### **Gambling Tax**

Cities and towns in Washington State may allow low-level gambling to take place and to impose a gambling tax. Birch Bay, a tourist oriented community, may allow low-level gambling to take place in bars and restaurants. If that is done, the new city may impose a tax that generates about \$2.00 per capita. The annual tax revenues would amount to about \$9,540.

### State and Federal Grants

Almost all cities take advantage of available federal and state grants. Some cities are more aggressive than others in pursuing grants and some cities even employ professional grant writers. Grants come in two kinds, soft money and hard money. Soft money grants refer to grants where the product is a research effort, a plan, a regulation or a program. Hard money grants usually refer to funds that are granted to build a bridge, a section of highway, a pier, a building, etc.

If the Birch Bay area were to incorporate, the State of Washington Office of Community Development would require that the new city prepare a GMA Comprehensive Plan and a set of Development Regulations. The Department of Ecology would require that the new city prepare and adopt a Shoreline Master Program. Both plans may be adaptations of the Whatcom County plans. The State would make grant funds available for these purposes. It is estimated that the GMA Comprehensive Plan grant would amount to about \$50,000 and the Shoreline Master Program Grant about \$30,000. Grants for shoreline enhancement, parks, and other community development activity, plus grant funds for law enforcement operations may be added. For purposes of this study, it will be assumed that the amount of revenue generated from the grant sources would amount to about \$100,000 per year.

### General Administration

The assumption is that if incorporation were to take place, the new city would operate in a council-manager structure. There would be seven city councilmen elected at large by the registered voters in the incorporation area. The seven councilmen would elect one of them the mayor. Four of the seven councilmen would be elected to a two year term and three to a four year term. The council would hire a city manager who would be in charge of the city operations. The city manger hires all staff members with the exception of the municipal judge. The municipal judge is appointed by the city council. The city clerk's office provides administrative services to the municipal court.

As stated above, the city manager is the chief executive officer. There would be five departments, each with a department head, reporting to the city manager. In addition to the five department, there would be a municipal court and a city attorney. The city attorney services would be

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contracted with an attorney in private practice. The five departments are as follows:

1. City Clerk
  - a. Record keeping (city council meetings)
  - b. Ordinances and resolutions
  - c. Court clerk services
2. Community Development
  - a. Land use planning and development regulations
  - b. Building inspection and code enforcement
  - c. Parks, recreation and tourism
  - d. Economic development
3. Finance
  - a. Billing
  - b. Accounting
  - c. Money management
4. Police
  - a. Patrol
  - c. Criminal investigation
  - d. Drug abuse prevention
5. Public Works
  - a. Roads and streets
  - b. Surfacewater management
  - c. Buildings and equipment management

### City Council and Mayor

The city council serves as the legislative and governing body of the city and has the responsibility of establishing city goals and policies and enacting them into laws. The city council is a sounding board for the community to address the needs and concerns of the residents, business community, and other interested parties affected by the actions of the city government. The city council adopts annually a city budget and appropriates funds from the city treasury for expenditure. The city council appoints the city manager and the municipal judge, as well as all citizen boards and commissions, such as the planning commission. The seven city councilmen elect one of their members to serve as the mayor. The Mayor is



the formal representative of the city in intergovernmental forums. The mayor presides over the meetings of the city council. The mayor has no voting power with the exception of a tie vote. The city council and the mayor are paid a modest salary to be determined by the city council. The estimated annual cost of the city council and mayor operations is \$33,400.

### **City Manager**

As stated above, the city manger is the chief executive officer of the city. The city manger's authority comes from the city council and from state statutes. Clerical assistance to the city manager would be provided by the city clerk's office. The annual cost of the city manger's office would be \$123,350. The city manger would be paid somewhere in the range of \$90,000 to \$100,000 per year, plus benefits.

### **City Attorney**

The city attorney is not an employee of the city but an attorney in private practice with municipal law experience. The city attorney would be hired on a contract basis. The city attorney advises the city elected and appointed officials regarding all matters of law pertaining to the business of the city. The attorney prepares and/or reviews ordinances, resolutions, motions, bid documents, petitions, easements, vacations, contracts, deeds, notices and any other legal papers relating to federal, state and/or local law. The city attorney prosecutes all violations of the city ordinances and prosecutes or defends civil actions brought by or against the city, its officers and/or employees in the performance of their duties. The annual cost of the city attorney would be \$80,000.

### **Municipal Court**

The municipal court has jurisdiction over traffic infractions, criminal traffic, criminal non-traffic, and other criminal violations of city ordinances. The municipal court may issue temporary orders for protection for victims of domestic violence. The municipal court provides multiple probation services, including probation supervision and pre-sentencing reports and recommendations. The municipal court provides a judge, prosecuting attorney, public defender for indigents, jury trials, interpreters, court clerk and probation officer. The annual cost of municipal court operation is estimated at \$202,000.

### **City Clerk**

The city clerk is the secretary of the municipal corporation and performs all functions normally carried out in that position. The city clerk is the keeper of required city records, files reports with county, state and federal agencies, and receives information from these sources. The city clerk is the personnel manager of the city. The city clerk staffs the meetings of the city council and all of its commissions and boards. The city clerk's office provides clerical assistance to the city manager. The estimated annual cost of operating the city clerk's office is \$146,400.

### **Community and Economic Development**

The community development department is responsible for land use planning, plan reviews, development regulations administration, building inspection, code enforcement, parks and recreation, tourism promotion and economic development. The department would be headed by a Community Development Department Director. In addition to the director, there would be an associate planner, a building official, a parks program manager, an economic development manager and clerk/secretary. The estimated annual cost of operations of the community development department is \$383,000.

### **Finance Department**

The finance department is responsible for billing for city services, accounting, money management, financial reporting, and cash flow management. The operations of the finance department are guided and mandated by federal, state and city codes as well as mandates from various other regulatory agencies. The department would be headed by a director and supported by a senior accountant, and a junior accountant. The annual cost of operating the finance department is estimated to amount to \$191,000.

### **Police Department**

The police department is responsible for public safety of the community. The two main functions of the police department are community patrol and investigation of misdemeanor and felony crime. The police department would be staffed by a police chief, a police sergeant, and three police officers. The five police officers would provide 16 hour service

from 6:00 AM to 10:00 PM, Monday through Sunday. Police service from 10:00 PM to 6:00 AM would be contracted out either to the City of Blaine or the Whatcom County Sheriff's Department. The estimated annual cost of the police operation is \$406,000.

### **Public Works Department**

The public works department is responsible for engineering, construction supervision, and maintenance of roads, streets, pathways, trails, and walkways. The department is also responsible for the engineering design, construction and maintenance of stormwater management facilities such as culverts, drains, ditches, swails, detention ponds and other mechanisms. The public works department also is responsible for the city buildings and city maintenance equipment and machinery. The department would be headed by a director of public works. Supporting the director would be an associate civil engineer, a maintenance crew foreman, and two maintenance men. The estimated annual cost of the public works department is \$436,000 which includes city offices (city hall) space leases and maintenance yard leases. Heavy equipment acquisition is part of capital expenditures.

### **Water and Wastewater Utilities**

If incorporation were to take place, water and wastewater utility services would continue to be provided by the Birch Bay Water and Sewer District. The District is an independent municipal corporation and would remain so in the incorporation process. The newly created city of Birch Bay could legally absorb the District since their respective boundaries are almost the same. The absorption must be approved by the Whatcom County Boundary Review Board. If the Birch Bay Water and Sewer District were to be absorbed into the new city of Birch Bay, it would become the utility department of the new city. The new city would assume any and all indebtedness of the District. The incorporation process does not change the water and sewer services rate structure.

### **Fire and Emergency Medical Services**

Fire and emergency medical services (EMS) for the citizens of Birch Bay are provided by Fire District No. 7 and Consolidated Fire District No. 13. Fire District 7 provides fire and EMS services to all properties south of

Bay Road while Consolidated Fire District 13 provides fire and EMS services to all properties north of Bay Road.

The incorporation process would require a decision to be made on how to continue providing fire and EMS services to the new City. Three options are available; the first would require the New City to contract with the two fire districts to continue providing service. This would be a model currently in place with Fire District #13 and the City of Blaine and with Fire District #7 and the City of Ferndale and most commonly in place with small cities throughout Whatcom County. The second option is to allow one of the fire districts to annex the new city. This model is in place throughout Washington State but requires a choice be made on which fire district would be utilized. The third option is that the new city could create their own fire department and provide fire and EMS services within its incorporated boundary. In doing so, the city would have to negotiate the transfer of parts of Fire District No. 7 and Consolidated Fire District 13 to the city. The city would have to absorb any and all outstanding indebtedness of the District or Districts. Any transfer of assets, such as fire stations, fire fighting apparatus and employees, would not only have to be approved by the new city and the respective District but also be approved by the Whatcom County Boundary Review Board. For the purposes of this study, the assumption is that the New City will contract with Fire Districts 7 and 13 for all fire and emergency medical services. This assumption is carried out though the remainder of this chapter. It is further assumed that the current property taxes levied by Fire Districts 7 and 13 will continue to be levied by the New City and paid out to the Fire Districts. Any changes in property tax rates will be set by the Fire Districts.

### **Library Services**

Library services to Birch Bay residents are currently provided by the Whatcom County Library District. The incorporation process does not contemplate any changes as to how library services are currently provided. The new city would be, however, empowered to create their own library service within the incorporation boundary and levy a library tax on property. The new city may want to that at some future date and locate their library or a County branch library at a potential future civic center site that also accommodates an elementary school.

### Schools

Kindergarten through 12<sup>th</sup> grade public education in the State of Washington is provided by school districts or by private schools. Some children are home schooled. Incorporation does not have an effect on how educational services are provided. Therefore, incorporating Birch Bay as a municipality would have no effect on the Blaine School District or the Ferndale School District which services a very small rural area of the Birch Bay community planning area, west of Kickerville Road.

### Contracted County Services

After incorporation, the new city of Birch Bay might want to contract with Whatcom County for a number of services. Animal control, jail services, public health, etc. are but a few services that the County can provide to a municipality at a cost far below what a city would have to pay if they were to provide these services themselves. These county services would need to be worked out in detail in the incorporation process.

### Parks and Recreation

After incorporation, it is assumed that the new city would take over Whatcom County park properties (beach access points) along Birch Bay Drive. The two County regional parks, Bay Horizon Park and Sunset Equestrian Park would remain as Whatcom County regional parks under the ownership and management of the County. The Birch Bay State Park would, obviously, remain a State park.

## Annexation to the City of Blaine

### Introduction

Annexation to the City of Blaine could be an alternative to incorporating as a City of Birch Bay or staying as an unincorporated urban growth area of Whatcom County. The County would have to amend the Whatcom County Comprehensive Plan to merge the Birch Bay and Blaine urban growth areas in order for Blaine to be able to annex the Birch Bay area. Annexations can be initiated either by a city or by the people currently living outside the municipal corporation boundary. This annexation study is

prepared from the perspective of the people living outside the municipal corporate boundary of the City of Blaine. This annexation study proposes to provide some information to the citizens of Birch Bay who may ask the question: "Will I be better off being annexed to the City of Blaine or to stay as part of an unincorporated urban growth area of Whatcom County?" This annexation study does not attempt to answer the converse question: "Will it be in the best interest of the City of Blaine to annex all or part of Birch Bay?"

### **Annexation Boundaries**

If the County amended its urban growth area boundaries to merge the Blaine and Birch Bay UGAs then annexation to the City of Blaine could happen in small pieces. Or the entire Birch Bay UGA can be annexed to the City of Blaine in one piece. For the purposes of this analysis, annexation by the City of Blaine means annexing all the of Birch Bay UGA. As a reminder, the Birch Bay incorporation study area is coincident with the proposed Birch Bay Urban Growth Area.

### **Annexation Process**

There are ways the City of Blaine, a code city, could go about annexing all or parts of Birch Bay. Two are election methods; initiated by a ten percent petition of the property owners, or initiated by a resolution of the annexing City Council. The third method is a petition method initiated by the owners of 60% of the assessed valuation in the area. The fourth method is a new petition method of annexation adopted by the State in April of 2003 (SSB 5409). This method of annexation is initiated by a petition signed by the owners of the majority of the acreage of property in the annexation area and the majority of the registered voters in the area.

**Ten Percent Petition Election Method.** The annexation of contiguous unincorporated territory may be initiated by a petition signed by voters living in the area to be annexed. The petition must be signed by qualified electors resident in the area proposed for annexation equal to ten percent of the votes cast at the last state general election in that area. A qualified elector is a person 18 years of age or over, a citizen of United States, and a resident for at least 30 days. A qualified elector need not actually have registered to vote. A qualified elector is not required to own property in the area proposed for annexation.

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The petition must state that there will be an election to determine the annexation, describe the proposed annexation boundaries, state the approximate number of persons residing in the proposed annexation area, state whether the property owners in the proposed annexation area will assume the city's existing debt, and set zoning classifications for the area proposed for annexation. The questions relating to the assumption of indebtedness and the adoption of zoning, may be submitted to the voters either separately or as a single proposition.

The petition submitted to the city must be certified by the county auditor for a determination of sufficiency. If there are sufficient valid signatures, the county auditor certifies the sufficiency of the petition to the city council. The city council must approve or disapprove the petition and notify the petitioners of its action.

After city council approval, the petition is filed with the legislative authority of the county and the boundary review board. The boundary review board may approve the proposal as submitted, may modify the boundaries of the proposal, or disapprove the proposal. The decision of the boundary review board is communicated to the county council, who in turn sets the date of the election. If the electorate votes in favor of the annexation, the county council must certify the election result and transmit it to the city council. The city council must then adopt ordinances providing for annexation, the adoption of the proposed zoning regulations, and the assumption of indebtedness. If the voters rejected a proposition on indebtedness, the city council may refuse to annex the territory. If all actions are successful, the city must conduct a population census in the annexed area and notify the State and the county auditor of the boundary changes for purposes of computing property tax levies and distribution of state revenue that is based on municipal population size.

**Election Method, Initiated by Resolution.** The annexation of contiguous, unincorporated territory may also be initiated by the city council resolution. After the annexation is properly initiated by resolution, the election procedures under this method are identical to those used in the election method initiated by the ten percent petition.

**Direct Petition Method.** The annexation of contiguous unincorporated territory within a City Urban Growth Area may also be initiated by a petition signed by the owners of 60% of the assessed valuation in the annexation area **or** the majority of the acreage plus the majority of the registered voters in the area. After public notice and a public hearing, the City may adopt an ordinance to annex all or a part of the territory. The

Whatcom County Boundary Review Board may also hold a hearing and consider the annexation if requested to do so by Whatcom County or 5% of the voters in the proposed annexation area. No election is held under this method.

### **Growth Management and Annexation**

In order to better understand the following, the reader should refer to Figure 7-1 Urban Growth Areas.

The Growth Management Act states that "it is appropriate that urban government services be provided by cities, and urban government services should not be provided in rural areas." Consistent with this goal of controlling the spread of urban growth, the GMA limits the territory that a city may annex to that which lies within its urban growth area. Since the Birch Bay planning area lies outside the City of Blaine urban growth area, the County would need to amend the Whatcom County Comprehensive Plan to merge the Birch Bay Urban Growth Area with the Blaine Urban Growth Area in order for the City of Blaine to be able annex Birch Bay.

For the City of Blaine to annex all or parts of Birch Bay, it must first annex the unincorporated territories that lie south of Dakota Creek and Drayton Harbor and north of Lincoln Road. Technically, the City of Blaine could expand southward from its most southern point, that being Shintaffer Road and Lincoln Road. However, such extension would leave an island of unincorporated land north of Lincoln Road and south of Drayton Harbor and Dakota Creek. The Boundary Review Board, who has a say over boundaries, most likely will not accept such geographic arrangement. Therefore, for the City of Blaine to extend south and annex significant parts or all of Birch Bay, it must first annex the land south of Dakota Creek and Drayton Harbor and north of Lincoln Road.

### **Role of the Boundary Review Boards**

The state legislature created review boards to ease the problems that may arise from the "rapid proliferation of municipalities and haphazard extension of and competition to extend municipal boundaries." See RCW 36.93.010. The boards are to promote the logical growth of local governments, reduce municipal competition for unincorporated territory, and preserve property values and consistent land use planning.



However, in counties in which the Growth Management Act applies, the responsibility to effect such policies now primarily resides with city and county governments. In apparent recognition of this shift of responsibility in Growth Management Act counties, the legislature has authorized any Growth Management Act county, as its discretion, to disband its boundary review board after the county and the cities and towns within it have adopted comprehensive plans and consistent development regulations that comply with Growth Management Act requirements. After disbandment of a boundary review board, cities and town within the county would not, presumably, have annexations reviewed by any board.

In Whatcom County, the County Boundary Review Board must approve an annexation petition submitted to the City of Blaine under the ten percent election method of annexation before it is subjected to the vote of the people. Boundary Review Board review is not required under the new Direct Petition method of annexation unless requested by the County or 5% of the registered voters. The Boundary Review Board, in its review process must look a long list of factors such as population density, land use, comprehensive plans and zoning regulations, per capita assessed valuation, topography, natural boundaries, drainage basins, municipal services and needs for municipal services, etc. The Boundary Review Board's decision must be based on findings of fact. The findings of fact, in turn, must be based on a list of objectives which are spelled out in RCW 36.93.180. A decision of the Board may be appealed to the superior court within 30 days. A government unit affected by the decision or any person owning property or residing in the area affected by the decision may file the notice of appeal.

## The Pro and Con Arguments

There are certain pro and con arguments that invariably surface during the course of an annexation attempt. Some arguments may be based on fact, some on emotion, and some on fear of change. Those involved in an annexation proceeding should be aware of some of the arguments and be in a position to prove or disprove each argument.

### Arguments Favoring Annexation

1. After annexation, the new territory will obtain its necessary services from city departments that are professionally staffed and experienced. Considerable economies can result from the coordination of services over a larger area.

2. When interrelationships between the city and the fringe area are close, there is need for unified planning and zoning. By means of annexation, a city's zoning ordinance can be extended to adjacent areas in a logical manner, thus helping to assure orderly growth.
3. Annexation gives suburban residents a voice in the government of the larger community in which they live. County dwellers can be substantially affected by actions of the central city, but they have no participation in its affairs.
4. Annexation increases a city's size and population, and in some instances raises its level of political influence, its prestige, and its ability to attract desirable commercial development.
5. Annexation may induce new businesses or industry to develop in the city, and thus create additional jobs, revenues, and commercial opportunities.

### **Arguments Opposing Annexation**

1. Annexation may be unwise if the community is not physically, economically, or socially related to the annexing city.
2. Residents outside the city may argue that they chose to build and live there in order to avoid taxes for services they do not want. Industrial and commercial businesses may state that they located outside the city to avoid certain business and property taxes.
3. There may be reservations concerning the government and politics of the city to which annexation is proposed.
4. Conversely, the city to which annexation is being proposed may not feel it is their best interests to annex.

### **Evaluation of Annexations**

As stated in the introduction, annexations are evaluated from the point of view of those being annexed and those who do the annexing. A person or property owner who is subjected to an annexation proposal usually considers three things. They are: 1) taxes; 2) level of municipal services; and 3) ability to influence government decision making. A sense of place is often a factor. However, Birch Bay has already garnered a sense

of place. When a person in Whatcom County says that I live in Birch Bay, that statement needs no further elaboration. Almost everyone knows where Birch Bay is. It has as much place recognition as currently incorporated cities in Whatcom County. The following evaluation of annexation takes a look, first, at taxes, then level of services and finally at the government decision making.

### Property Taxes

A comparison of property taxes paid by a property owner in Birch Bay before and after annexation to the City of Blaine is shown in Table 16-3. The source of this information is the Whatcom County Assessor's office showing year 2002 tax rates for the City of Blaine and the Birch Bay area.

**City of Blaine Property Tax Levy.** City property taxes are levied only on property that is inside the boundary of the City. Only properties in Blaine pay the Blaine property tax rate. State law limits a city levy rate to \$3.60 per \$1,000 assessed value, but the voters in a city can approve extra taxes at an election. Although, the State law permits a city to levy up to \$3.60 per \$1,000 assessed value, very few cities can actually collect that, because the levy of special districts must be subtracted from that amount. The library district levy has a maximum rate of \$0.50 per \$1,000 assessed value and the fire district levy can be as high as \$1.50 per \$1,000 assessed value. Therefore, if a city belongs to both a fire district and a library district, and if these districts are currently levying their maximum amount, then the local city levy can be no higher than \$1.60 per \$1,000 assessed value.

The City of Blaine is currently assessing \$1.66689 per \$1,000 assessed value. In addition, the City is currently assessing \$0.90000 for street improvements and an additional \$0.22455 for the City's community center. In total, the City's property tax assessment amounts to \$2.79135 per \$1,000 assessed value.

In the year 2002, the City of Blaine is paying out \$1,417,582 in debt service. Of this amount \$372,280 or about 26 percent of the total debt service payments is composed of general obligation bond debt. If Birch Bay were to be annexed to the City of Blaine and the voters were to vote to share in the debt of the City, then Birch Bay property owners would become debt payers to retire the outstanding general obligation debt. The other debt payment of \$1,045,302 or about 74 percent of it is limited to specific areas

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such as limited improvement districts. The latter debt payment number also includes some revenue obligated debt for a fire station.

**Table 16-3**  
**Property Tax Levy Rate Comparison**

<b>Item</b>	<b>As is Whatcom County F. D. 7</b>	<b>As is Whatcom County F.D. 13</b>	<b>Annex to Blaine</b>
City of Blaine - basic	Not applicable	Not Applicable	1.66680
City of Blaine – street improvements	Not applicable	Not applicable	0.90000
City of Blaine – community center	Not applicable	Not applicable	0.22455
State schools (SPI)	3.14299	3.14299	3.14299
Whatcom County current expense fund	1.40444	1.40444	1.40444
Whatcom County election reserve	0.02972	0.02972	0.02972
Whatcom County mental health	0.01250	0.01250	0.01250
Whatcom County developmental disabilities	0.01250	0.01250	0.01250
Whatcom County veterans relief	0.01125	0.01125	0.01125
Conservation Futures	0.06136	0.06136	0.06136
Port of Bellingham	0.39012	0.39012	0.39012
Whatcom County roads	2.13885	2.13885	Not applicable
Rural Library – regular	0.50000	0.50000	0.50000
Fire District No. 7	1.03807	Not applicable	Not applicable
Fire District No. 13	Not applicable	1.27000	Not applicable
Blaine School District No. 504 - M & O	3.40529	3.40529	3.40529
Blaine School District No. 504 – Bond	1.92043	1.92043	1.92043
<b>Totals</b>	<b>14.06752</b>	<b>14.29945</b>	<b>13.68195</b>

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Property taxes are levied by action of the city council, up to the statutory maximum rate and subject to the 101 percent lid on property taxes. Increases beyond the statutory maximum and the 101 percent lid require voter approval. Referendum 747, approved by the voters, limits property tax increases to 1 percent in taxing districts of less than 10,000 population.

**State Schools.** In the year 2002, state schools levy \$3.14299 per \$1,000 assessed value for operation of the state K-12 educational system. About 80 percent of the funds collected are paid back to school districts primarily for teacher salaries at a fixed rate per student which is somewhere between \$3,000 and \$4,000 dollars per student. Capital construction payments to school districts are on a competitive basis. Moneys coming into the capital construction fund come from sale of state owned timber plus lease payments generated from leasing of state owned land.

**Consolidated County Property Tax Levy.** The consolidated Whatcom County tax levy is composed of the following: 1) County current expense fund (1.40444); 2) County election reserve (0.02972); 3) County mental health (0.01250); 4) County developmental disabilities (0.01250); 5) County veterans relief (0.01125); and County conservation futures (0.06136). The total consolidated County levy amounts to \$1.53177 per \$1,000 assessed value. Whether a property owner is within or outside the City of Blaine, they pay the full amount of Whatcom County consolidated taxes.

**Port of Bellingham Tax Levy.** The Port of Bellingham levies \$0.39012 per \$1,000 assessed value for projects that generate jobs and promote economic development within Whatcom County. The tax is levied countywide.

**County Road Tax Levy.** Whatcom County Road property tax is paid only in the unincorporated area of Whatcom County. Property owners within the City of Blaine do not pay the County road property tax levy. The collected funds are used to pay a part of the construction and maintenance of the County road system in the unincorporated part of the County. The County road property tax levy amounts to \$2.13885 per \$1,000 assessed value.

**Rural Library Property Tax Levy.** Rural library property tax levy of \$0.50000 per \$1,000 assessed value is paid throughout the rural library district which includes both Birch Bay and the City of Blaine.

**Fire District Property Tax Levy.** Fire District 13 services all of the City of Blaine and most of the Birch Bay area, extending south to Bay Road. Territory south of Bay Road is in Fire District 7. The property tax levy rate for Fire District 7 amounts to \$1.03807 per \$1,000 assessed value and for Fire District 13, the levy rate is \$1.27000 per \$1,000 assessed value. The levy rates for each of the Fire Districts include a rate for emergency medical services.

**Blaine School District Tax Levy.** The Blaine School District, who's territory covers all of the City of Blaine and all of the Birch Bay incorporation study area, levies \$3.40529 per \$1,000 assessed value for school maintenance and operational purposes and an additional \$1.92043 per \$1,000 assessed value for bond redemption.

**Summary of Property Tax Rates.** A property owner in the City of Blaine is levied \$13.68195 per \$1,000 assessed value for property taxes, as shown in Table 16-4. A property owner in Birch Bay who is in Fire District 7 and has been annexed to the City of Blaine and is not committed to share in the City's indebtedness would be levied \$12.32547 per \$1,000 assessed value. A property owner in Birch Bay who is in Fire District 13 and has been annexed to the City of Blaine and is not committed to share in the City's indebtedness would be levied \$12.5574 per \$1,000 assessed value. A Birch Bay property owner who is in Fire District 7 is currently levied \$14.06752 per \$1,000 assessed valuation. A Birch Bay property owner who is in Fire District 13 is currently levied \$14.29945 per \$1,000 assessed value.

If property owners in Birch Bay were to annex to the City of Blaine and would agree by vote of the annexed to share in the debt load of the City of Blaine, their levy rate would increase by \$1.12455 per \$1,000 assessed value. The levy rate for a property in Birch Bay and in Fire District 7 and annexed to the City of Blaine would be levied at the rate of \$13.45002 per \$1,000 assessed value. The levy rate for a property in Birch Bay and in Fire District 13 and annexed to the City of Blaine would be levied at the rate of \$13.68195 per \$1,000 assessed value.

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**Table 16-4**  
**Property Tax Levy Rates Summary**

Item	As is Whatcom County	Annex to Blaine
City of Blaine territory	---	13.68195
Birch Bay - Fire District 7 territory	14.06752	13.45002
Birch Bay - Fire District 13 territory	14.29945	13.68195

A home located in the City of Blaine and valued at \$150,000 is paying about \$2,052 in property taxes per year. An identical home, valued at \$150,000, located in Birch Bay and in Fire District 7 is currently paying about \$2,110 in property taxes per year. An identical home, valued at \$150,000, located in Birch Bay and in Fire District 13 is currently paying about \$2,145 in property taxes per year. An identical home, valued at \$150,000, located in Birch Bay and in Fire District 7 and annexed to the City of Blaine would pay about \$1,849 in property taxes per year, provided the no debt is assumed. An identical home, valued at \$150,000, located in Birch Bay and in Fire District 13 and annexed to the City of Blaine would pay about \$1,884 in property taxes per year, provided the no debt is assumed. An identical home, valued at \$150,000, located in Birch Bay and in Fire District 7 and annexed to the City of Blaine would pay about \$2,028 in property taxes per year, provided debt is assumed. An identical home, valued at \$150,000, located in Birch Bay and in Fire District 13 and annexed to the City of Blaine would pay about \$2,052 in property taxes per year, provided debt is assumed. The above numbers are shown in table form in Table 16-5.

### **Level of Municipal Services**

**Fire Protection and EMS Services.** Since the City of Blaine is being serviced by Fire District 13, as is most of Birch Bay, the decision to annex or not annex, therefore has no level of service effect. If Birch Bay were to be annexed to the City of Blaine, that part of the Birch

## GOVERNANCE

Bay area that is in Fire District 7 would remain there and be serviced by Fire District 7.

**Table 16-5**  
**Property Taxes on a \$150,000 House**

Item	As is Whatcom County	Annex to Blaine
In the City of Blaine	--	\$2,052
Birch Bay, Fire District 7	\$2,110	--
Birch Bay, Fire District 13	\$2,145	--
Birch Bay annexed to Blaine, Fire District 7, no debt assumption	--	\$1,849
Birch Bay annexed to Blaine, Fire District 13, no debt assumption	--	\$1,884
Birch Bay annexed to Blaine, Fire District 7, assumption of debt	--	\$2,028
Birch Bay annexed to Blaine, Fire District 13, assumption of debt	--	\$2,052

**Police Protection.** If Birch Bay were to be annexed to the City of Blaine, the level of police protection currently in existence at the City of Blaine would be extended to the entire Birch Bay annexation area. The police response time in critical situations would drop from current 20 minutes to about 5 minutes. Due to the extent of the territory, the City of Blaine, most likely, would have to locate a police precinct in the Birch Bay area.

**Sewer and Water Services.** Whether Birch Bay is annexed or not annexed to the City of Blaine, the level of water and sewer services being provided by the Birch Bay Water and Sewer District will not change. Therefore, annexation would have no impact on the provision of sewer and water services.



**Parks and Recreation.** The predominant providers of park and recreation facilities and services are the County and the State. Whether Birch Bay annexes to the City of Blaine or not will have little impact of the level of parks and recreational services. The County and the State will continue to provide these services as they are today.

**Roads and Transportation.** The level of transportation services under the annexation option would stay or, most likely, have very little impact one way or another. The county has done a very good job of keeping the road system in the Birch Bay in reasonably good shape. So has the City of Blaine within their territory. Therefore, there will be little or no noticeable effect as a result of annexation.

**Schools.** Municipal boundaries have no impact on the school system. Blaine School District will continue to provide school services both inside and outside of the City of Blaine corporate boundary.

**Stormwater Management.** Under the annexation option, stormwater management is most likely to improve. The City of Blaine has a more active stormwater management program than does the County.

**Planning and Development Regulations.** If Blaine were to annex the Birch Bay area, the City of Blaine Comprehensive Plan and Development Regulations would need to be updated. The City would need to add a number of staff people to the Planning Department to handle the added load of processing plan reviews and building inspections. The shoreline Master Program also needs updating. These functions are currently handled very well by the County Planning Department.

### **Government Decision Making**

With Birch Bay being annexed to the City of Blaine, a number of city councilmen would be elected from the Birch Bay area, giving the City government a closer tie with the people of Birch Bay. Annexation would clearly bring the two communities together and give the people a feeling that their concerns, whatever they may be, are being listened to at the local level. The level of satisfaction with government services is clearly going to increase.

# Interim Service Improvements for Unincorporated Birch Bay

## Introduction

The residents of Birch Bay have voiced a desire to elevate certain County governmental services to a higher level. Specifically, the residents want to see more road improvements, a more aggressive parks development and recreation program, and significant improvements in managing storm-water flows and police services. The following sub-sections describe strategies for providing the desired governmental services until such time as incorporation or annexation is feasible.

## Transportation

The residents of Birch Bay have stated that they would like to see urban standard roads in Birch Bay, with pedestrian facilities and street lights. . Over time, the County will need to spend additional funds for roadway improvements in the Birch Bay area. Where does this additional money come from? Since the County is using the conventional transportation funding sources to the maximum, the County needs to turn to the taxpayers of Birch Bay to raise additional funds for achieving the desired higher level of transportation services. There are a number of options. Each option is discussed in a sub-paragraph below.

**Road Improvement Districts.** A Road Improvement District is a form of special benefit assessment district. The Road Improvement District allows specific improvements to be paid for by properties that directly benefit from the improvements. The funding mechanism involves the sale of Road Improvement District bonds. The bonds are redeemed from district voted property taxes. A Road Improvement District in Birch Bay area may consist of a few large lots or the entire Birch Bay Community area. The creation of a Road Improvement District and the funding of it must be approved by the voters residing in the District.

**Local Improvement Districts.** A Local Improvement District is a special transportation improvement district formed and funded by property owners to privately finance specific capital improvements. The Local Improvement District levies special assessment taxes on the increased value of property resulting from road improvements made in the Local Improvement District. When initially forming a Local Improvement

District, property owners are assessed their portion of the required capital, based on the value of their property without improvements. Special assessments are levied after improvements are complete and property values increase in response to benefits provided specifically by road improvements.

**Road Impact Fees.** Road impact fees are charges assessed on new development, as a condition of approval, to pay for road improvements needed to serve new growth. The purpose and size of the fees must be reasonably related to the new development which creates the additional demand for road services. Road impact fees should contribute a proportionate share of the cost of, and be used for, road improvements where the benefits are reasonably related to the new development. Road impact fees cannot be used for operation, maintenance, repair, alteration, or replacement of existing roads used to meet existing service needs. For Whatcom County to impose road impact fees, the County Council must do so by adopting a road impact fee ordinance that is county-wide and applies to all new development in the unincorporated area.

**State Environmental Policy Act (SEPA).** Under the State Environmental Policy Act (SEPA), the County may require developers to mitigate the impacts of new development on the County road system. The definition and magnitude of "impact" is determined through the development review process. Road impacts are estimated through a road impact study or analysis process, usually included in an environmental impact statement or it is attached to a SEPA environmental checklist. Mitigation can include cash payments to the County, building to certain standards, donation of land, other in-kind contributions, or a combination of the above described mitigation actions.

**Transportation Benefit District.** In 1987, the State Legislature authorized the creation of the Transportation Benefit Districts. The Districts are allowed a variety of funding techniques, including imposing a local option gas tax increase, general obligation and revenue bonds, excess property tax levies, benefit assessments, and impact fee mitigation fees. Transportation Benefit Districts can be used on a much larger scale than Local Improvement Districts. The intent of the Transportation Benefit District is to solve some of the multi-jurisdictional transportation funding and implementation problems. In the Birch Bay area, the Birch Bay Community can join together with the City of Blaine to form a Transportation Benefit District.

**Local Transportation Act.** The Local Transportation Act enables local governments, including counties, to implement programs for the joint public and private funding of transportation improvements required because of growth and economic development. The Local Transportation Act is not a funding source, but it is enabling legislation that eases some of the restrictions on innovative transportation financing, especially for local government. The Act streamlines the use of both Transportation Benefit Districts and Local Improvement Districts and makes provisions for latecomer financing mechanisms for Local Improvement Districts.

### Parks and Recreation

**Northwest Park & Recreation District.** In the Birch Bay area, including the City of Blaine, there exists a special district called the Northwest Park & Recreation District. It has the same boundaries as the Blaine School District. It has been inactive and not exercising its option of presenting for voter approval of a levy and/or bond issue for the purpose of providing parks and recreation facilities and recreation programs. If the petition or resolution initiating the formation of the proposed park and recreation service area proposes that the initial capital or operational costs are to be financed by regular property tax levies for a six-year period as authorized by RCW 36.68.525, or an annual excess levy, or that proposed capital costs are to be financed by the issuance of general obligation bonds and bond retirement levies, a proposition for such purpose or purposes may be submitted to the voters for the proposed service area at the same election. A proposition or propositions for regular property tax levies for a six-year period as authorized by RCW 36.68.525, an annual excess levy, or the issuance of general obligation bonds and bond retirement levies, may also be submitted to the voters at any general or special election.

**Cultural Arts, Stadium and Convention District.** The voters in the Birch Bay Community, with the cooperation and assistance of the Whatcom County Council can create, with the voter approval, a Cultural Arts, Stadium and Convention District. The purpose of the District is to expand tourism and attract new visitors to the State of Washington and in the development of a nonpolluting industry. The creation or renovation, and operation of cultural arts, stadiums and convention facilities benefiting all the citizens of the Birch Bay area would enhance the recreational industry's ability to attract such new visitors. The additional income and employment resulting therefrom would strengthen the economic base of the area. The State Legislature, at the enactment of this statute declared that the construction, modification, renovation, and operation of facilities for

cultural arts, stadium and convention uses will enhance the progress and economic growth of this state. The continued growth and development of this recreational industry provides for the general welfare and is an appropriate matter of concern to the people of the State of Washington.

Any cultural arts, stadium and convention district has the power to issue general obligation bonds for capital purposes only, not to exceed an amount, together with any outstanding nonvoter approved general obligation indebtedness equal to three-eighths of one percent of the value of taxable property within such district. A cultural arts, stadium and convention district is additionally authorized to issue general obligation bonds for capital purposes only, together with any outstanding general obligation indebtedness, not to exceed an amount equal to three-fourth of one percent of the value of the taxable property within the district, and to provide for the retirement thereof by excess levies when the voters approve a ballot proposition providing for both the bond issuance and imposition of such levies at a special election called for that purpose.

**Public Facilities District.** A public facilities district may be created in any county and shall be coextensive with the boundaries of the county. A public facilities district may be created upon adoption of a resolution providing for the creation of such a district by the county legislative authority in which the proposed district is located. The district may levy a sales and use tax and an excise tax with voter approval. The district may levy an admission tax not to exceed one cent on each twenty cents paid by the person who pays an admission charge to a regional center. The district is also authorized, with voter approval, to issue general obligation bonds, not to exceed an amount, together with any outstanding nonvoter approved general obligation indebtedness, equal to one-half of one percent of the value of taxable property within the district. The district board of directors may issue revenue bonds to be redeemed from facilities operating revenue. The district may levy an ad valorem property tax, in excess of the one percent limitation, upon the property within the district for a one-year period to be used for operating or capital purposes whenever authorized by the voters of the district. The public facilities district may impose a hotel-motel tax. The hotel-motel tax is described in greater detail below.

**Hotel-Motel Tax.** A public facilities district may impose an excise tax on the sale of or charge made for the furnishing of lodging by a hotel, rooming house, tourist court motel, or trailer camp, except that no such tax may be levied on any premises having fewer than forty lodging units. If a public facilities district has not imposed such an excise tax prior

to December 31, 1995, the public facilities district may only impose the excise tax if a ballot proposition authorizing the imposition of the tax has been approved by a simple majority vote of voters of the public facilities district voting on the proposition. The rate of the tax shall not exceed two percent and the proceeds of the tax shall only be used for the acquisition, design, construction, remodeling, maintenance, equipping, reequipping, repairing, and operation of its public facilities. This excise tax shall not be imposed until the district has approved the proposal to acquire, design, and construct the public facility. A public facilities district may not impose the tax authorized in this section if, after the tax authorized in this section was imposed, the effective combined rate of state and local excise taxes, including sales and use taxes and excise taxes on lodging, imposed on the sale or charge made for furnishing of lodging in any jurisdiction in the public facilities district exceeds eleven and one-half percent.

### **Storm and Surface Water Management**

**Storm & Surface Water Management District.** Whatcom County is empowered to create a Storm and Surface Water Management District encompassing the entire unincorporated Whatcom County or a specified area, such as Birch Bay. With increased development comes increased storm water runoff, which causes flooding and erosion, damage to aquatic habitat, and increased pollutants washed into surface waters. The District is empowered to assess a storm and surface water management fee. In the City of Bellingham, the fee for a single family residential customer whose homes have a footprint of 3,000 square feet or less are charged \$5.00 in 2002 and \$7.00 in 2003 and thereafter. Homes and businesses with larger amounts of impervious surface are charged per square foot of impervious area. Storm and surface water management fees in other communities are as follows: Bothell \$5.56 /month; Bellevue \$8.86 /month; Olympia \$6.00 /month; Redmond \$11.50 /month; and Puyallup \$7.07 /month.

### **Action Strategies**

1. The Governance Implementation Subcommittee of the Birch Bay Steering Committee should approach the City of Blaine to discuss annexation of the Birch Bay Urban Growth Area to the City. If the City is receptive to this alternative, the committee should prepare and distribute public information regarding the process and the pros and cons of annexation.

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2. The Governance Implementation Committee of the Birch Bay Steering Committee should develop and distribute public information regarding the pros and cons of incorporation. Whatcom County should assist the Committee in preparing a more detailed financial analysis and information on the incorporation process.
3. If there is sufficient public interest and support for incorporation, the County should assist the Birch Bay Governance Implementation Committee to develop and circulate a petition to initiate an incorporation election.
4. The County Council should develop and adopt an impact fee ordinance to collect traffic and park impact fees from all new development within the Birch Bay Urban Growth Area to fund a pro-rata share of the transportation and improvements identified in the Birch Bay Capital Facilities Plan.
5. The County and the Birch Bay Public Education, Health and Safety Subcommittee should meet with the Blaine School District to determine whether the District is interested in school impact fees and pursue this option if there is interest.
6. The Natural Resource/ Parks Subcommittee of the Birch Bay Steering Committee should work with the Northwest Parks and Recreation District and the City of Blaine Parks Board to pursue a tax levy to support parks and recreation services and facilities within the District Boundaries, which includes the City of Blaine.
7. The Stormwater/ Shellfish Subcommittee should continue to work with the County Public Works Department, Birch Bay Water and Sewer District and appropriate agencies and organizations to develop funding sources for storm water management and shellfish protection.

## Chapter 17

# CAPITAL FACILITIES PLAN

## Scope and Purpose

### Scope

The Birch Bay Capital Facilities Plan is a multi-year prioritized schedule of capital facilities. It includes those projects necessary for Whatcom County and special purpose districts to deliver urban area services to its constituent public. The 2003-2022 projects in the Birch Bay Capital Facilities Plan include: parks and recreation, sewer, water, transportation, storm drainage, police, fire, emergency medical services and schools. It does not include the following: hospitals, courts, jails, telecommunications, natural gas, electrical energy, and public transit.

The Birch Bay Capital Facilities Plan is primarily a “projects driven” plan, which means that it tries to identify the needed revenue to finance a predetermined set of projects. This is different from a revenue driven plan, which sets aside an amount of revenue for capital expenditures and selects the highest priority projects for implementation. A “revenue driven” plan differs from a “projects driven” plan in that the amount of revenue determines the selection of capital projects for implementation.

### Purpose

The purpose or benefits of the Birch Bay Capital Facilities Plan can be summarized as follows:

- Focuses on repair or replacement of existing facilities and equipment;
- Focuses attention on community goals, needs, and capabilities;
- Promotes efficiencies by reducing scheduling problems;
- Achieves optimum use of the taxpayers dollars;
- Guides future community growth and development;
- Serves wider community interests;
- Encourages more efficient government;
- Maintains a sound and stable financing program;



- Provides citizens information about overall community needs and resources;
- Enhances opportunities for participation in federal or state grant-in-aid programs; and
- Helps decision makers to save time and avoid surprises.

The Birch Bay Capital Facilities Plan takes stock of capital facilities, identifies needed projects, prioritizes the projects, and programs the priority projects for implementation in two "six-year" programs and one "eight year" program.

## Inventory of Existing Facilities

Existing Capital Facilities are described in the other chapters of this plan applicable to the service or facility. The existing water, sewer and stormwater system is described in Chapter 10-Utilities; the transportation system is described in Chapter 11-Transportation; parks are described in Chapter 12-Parks and Recreation; schools are described in Chapter 15-Public Education; and fire facilities are in Chapter 15-Public Health and Safety. There is no community meeting facility, library, post office, or police station in Birch Bay.

## Prioritization and Financing

### Prioritization

The Birch Bay Capital Facilities Plan differs from a typical county or municipal capital facilities plan. The Birch Bay Capital Facilities Plan represents only a part of the overall Whatcom County Capital Facilities Plan and the capital facilities plans of special purpose districts, such as the Birch Bay Water and Sewer District, the Fire Districts and the School District. Therefore, any Birch Bay project proposed for County or special purpose district financing and implementation needs to be considered and weighed against other County and special purposed district projects. A number one priority project in Birch Bay may be a priority four or five project on a County-wide scale.

### Financing

Birch Bay, as an unincorporated urban growth area, does not have a funding source of their own to be allocated for capital improvement projects. Birch Bay always has to ask the County and special purpose

districts to place Birch Bay priority projects high on the County and special purpose districts lists so that limited financing can reach down and cover the particular Birch Bay priority project.

With the “project driven” plan, Birch Bay is more reliant on pay-as-you-go financing rather than debt financing. The exception is the Blaine School District that finances most of their capital projects by selling bonds. Debt financing requires the County and special purpose districts to tap credit markets and raise funds through the issuance of debt obligations (mostly bonds). Pay-as-you-go financing requires the County and special purpose districts to pay for infrastructure costs directly from current revenue sources. With pay-as-you-go financing, large capital projects must be planned well in advance so that a reserve fund can be established and money can be saved to fund the project. The County and special purpose districts actively pursue grant monies from a variety of sources to help fund local projects. State and federal grant and loan programs have financed many capital projects throughout the County.

## Definitions

### Capital Facilities

Capital facilities are structures, improvement, equipment, or other major assets, including land that has a useful life of at least five years. Governmental capital facilities are provided for public purposes and services including, but not limited to, the following: detention facilities, fire and rescue, government offices, information systems, law enforcement, libraries, open space, parks, public health, recreation facilities, roads and streets, publicly owned land, sanitary sewers, sidewalks, bikeways, disability access ramps, solid waste collection and disposal, stormwater facilities, street lighting systems, traffic signals, water wells, water storage facilities, water distribution systems, and others.

### Capital Expense

Capital expense is defined as an expenditure committed to building, purchasing or a non-recurring rehabilitation of a capital facility, as defined above. Capital expenses generally are expenditures in excess of \$25,000.

## Capital Outlay

Capital outlays are expenditures committed to purchasing such things as computers, office furniture, minor equipment repairs and replacement, etc. Capital outlays generally fall below a \$25,000 expenditure amount.

## Goals and Policies

### Goal

Birch Bay shall undertake actions necessary to adequately provide and maintain public facilities and services to meet the primary service needs of Birch Bay in a manner which protects investments in existing facilities, maximizes the use of existing facilities, and promotes orderly compact growth.

### Policies

#### A Project Prioritization Policies

1. Projects mandated by law, as well as by state and federal regulations, will receive priority consideration.
2. Projects necessary to correct existing deficiencies will receive priority consideration.
3. Projects previously initiated will be completed in subsequent phases and will receive priority consideration.
4. Projects providing for the renovation of existing facilities resulting in preservation of the community's prior investment or reducing maintenance and operating costs will receive priority consideration.
5. Projects whose construction or acquisition result in new or substantially increased operating costs will be considered after an evaluation of needs and operating costs have been identified.

## CAPITAL FACILITIES PLAN

### **B     Financing Policies**

1. Birch Bay considers the “pay-as-you-go” method of financing as the preferred method of financing capital improvements.
2. Birch Bay advocates debt financing only if the “pay-as-you-go” method of financing places an overly undue burden on existing taxpayers and utilities ratepayers.
3. Where grants or private funds are available to finance capital projects, efforts will be made to secure those funds.

### **C     Planning Policies**

1. Foster orderly, desirable growth in appropriate locations at a rate consistent with citizen desires and the provision of adequate services and facilities.
2. Growth and development throughout the urban area should be regulated, stimulated, and otherwise guided toward the development of compact concentrated areas to discourage sprawl, facilitate economical and efficient provision of utilities, public facilities and services, and to expand transportation options to the public.
3. Increase the tax base by encouraging and supporting the rehabilitation and improvement of dilapidated and deteriorated areas.

### **D     Capital Facilities Plan Policies**

1. Projects included in the Capital Facilities Plans of Whatcom County and special purpose districts will be consistent with the Birch Bay Community Plan.
2. Birch Bay residents urge that Whatcom County designate the Director of Planning and Development Services be responsible for the annual update of the Birch Bay Capital Facilities Plan.
3. Birch Bay residents urge that the Birch Bay Capital Facilities Plan be used in the preparation of the County's yearly capital budget.

## Revenue Sources

### Current Revenue Financing

For many years, the County and special purpose districts have financed certain capital projects out of current revenue. The County or a special purpose district sets up a reserve account and annually sets aside a certain sum of money until the total sum needed to pay for a specific capital project has been accumulated. The current revenue financing is also often called “pay-as-you-go” financing. The current revenue method of financing capital projects has a number of advantages. Some of the advantages are listed below:

- *Fiscal Responsibility.* Necessitates a more conservative approach toward the authorization of new facilities, discouraging over-commitment of resources.
- *Flexibility.* Does not commit future revenues, thereby allowing greater flexibility to meet changes in future needs.
- *Reduced Interest.* Frees these interest payments for other uses.
- *Borrowing Capacity.* Conserves borrowing capacity, both in terms of legal limits and fiscal prudence, for periods of greater need. Present fiscal flexibility is traded for greater future flexibility.
- *Counter Cyclical Balance.* Using high revenues in good years for capital avoids expanding services to a level that can’t be afforded in poor years.
- *Simple Administration.* No bond issues to pass, no complex arbitrage regulations, no debt service to administer.

### General Fund

The County's general fund can best be described as the fund that pays for the County's general services. The fund derives its revenue from a number of sources including property taxes, franchise fees, licenses and permits, fines and forfeitures, charges for services, and other sources.

## CAPITAL FACILITIES PLAN

The County's general fund is the most flexible in terms of expenditures. The County Executive and the County Council have the discretion of spending the County's general fund moneys on any governmental function without having to restrict the expenditure to a specific function. On the other hand, sewer funds for example, generated from sewer charges are limited to maintenance and capital construction of sewer facilities, administered by the Birch Bay Water and Sewer District. Therefore, the County's general fund is under tremendous pressure to fund not only the many needed and mandated services, but also an array of needed capital improvements.

Property taxes are the most significant source of revenues for the County General Fund. The taxable assessed value of properties within the Birch Bay Urban Growth Area for year 2002 was \$440,175,005. Applying the 2002 County levy rate of \$1.47 per \$1,000 valuation, property taxes paid by property owners within the Birch Bay Urban Growth Area generated approximately \$647,000 in revenues in 2002. If Birch Bay incorporated, approximately \$704,280 in property tax would be generated by the new City.

Retail sales tax is the other significant source of general fund revenues. Retail sales are not tracked by geographic area, so it is difficult to determine the amount of sales tax collected from businesses in Birch Bay. A number of restaurants, small stores and tourism establishments in Birch Bay collect sales and use tax. Sales tax is also collected on the materials and appliances installed in new construction. The incorporation analysis in Chapter 16 estimates that approximately \$420,000 in sales tax revenue was collected in the Birch Bay UGA in 2002. 84% of this revenue would go to the City if Birch Bay incorporated.

The majority of the County General Fund revenues pay for County-wide government services, including the County Sheriff, Court system and Health Department, but a portion of these funds are spent on Capital Improvements included in the County six-year capital improvement plan. The County Parks Department budget is approximately 6% of the County General Fund budget. If this same percentage were applied to tax revenues generated in Birch Bay, it could be assumed that \$60,000 per year may be available for the construction and operation of parks and recreation facilities in Birch Bay.

## Real Estate Excise Tax

Counties are permitted to levy real estate excise tax (REET) on all real estate sales within the municipal boundary. A municipality that is required to plan under the Growth Management Act can levy two 0.25 per cent pieces, totaling 0.5 per cent on all real estate sales. The amount of REET collected fluctuates from year to year and is dependent on the level of real estate activity. For the Birch Bay Urban Growth Area, REET is estimated at \$400 per \$1 million assessed taxable value, resulting in revenues of \$178,95 per year. The County Council indicated that the majority of the second .25 per cent will be allocated for parks and stormwater facilities. Over 20 year planning period, REET collected in Birch Bay could contribute as much as \$1.7 million for capital projects. If Birch Bay incorporates, the City could collect this tax.

## Enterprise Funds

Enterprise funds are derived from operation of a governmental enterprise such as water and sewer services, etc. Enterprise funds are restricted to be expended on the furtherance of the specific enterprise. Enterprise fund revenue rates are periodically reviewed and adjusted to make sure that the revenue generates the amount of funds needed to operate, maintain and upgrade the specific enterprise. All revenues derived by the Birch Bay Water and Sewer District are considered enterprise funds. Enterprise funds may include impact fees, connection fees or user fees collected to fund the operation or improvement of a facility impacted by development.

## Intergovernmental Revenue

Intergovernmental revenue comes to the County and special purpose districts, such as the Blaine School District, from the State of Washington. Federal funds are usually passed through a state agency, such as the Washington State Department of Transportation for federal aid highway funds.

## Grants

Grants can be both government and private sector. The County Sheriff's Department has been a recipient of a number of state pass-through federal grants for law enforcement improvements. Grant fund sources are very unpredictable because most grant monies are awarded on a competitive basis, based on the merits of a particular proposal.

## Debt Financing

Debt financing means borrowing money to pay for capital improvements today and paying the borrowed money back over a period of time with interest. Any governmental debt incurred that is backed by the full credit and faith of the County requires the vote of the people. The debt incurred is backed by the revenue stream of the County or by enterprise revenues, such as sewers. It is incurred by election and the action of the County Council or the special purpose district Board of Directors. Cash is raised by the sale of municipal bonds which, in general, are exempt from federal income taxes.

Debt financing requires the pay back of not only the principal, but also interest. The interest rate on municipal bonds is relatively low but, even at a low interest rate, 15 to 20 year loan repayments generate a substantial interest cost. Therefore, governments have been inclined to stay away from debt financing whenever possible. However, debt financing does have its advantages which are described briefly below:

- Acquisition as needed. Allows more of the facilities to be acquired as they are needed rather than after funds are accumulated.
- Reduced current payments. Reduces costs for current residents since more people (and wealth) will share future debt service payments in an expanding economy.
- Inter-generational equity. Requires future users to share in paying for their use of facilities. (Pay-as-you-go requires current users to pay the cost of facilities used by future users)
- Repayment in cheaper dollars. Payments are at a fixed rate while inflation will increase in the future.



## CAPITAL FACILITIES PLAN

- Opportunity costs. Conserves current revenues to be used for facilities allowing their use for other “opportunities”. (These opportunity costs may be either within or without the governmental unit; tax funds can be used for other purposes, or less tax money may be required, leaving more money available for consumption or investment in the community).
- Growth equity. New residents will assist in paying debt service on facilities they will use.
- Separate funding. Special taxes can be authorized by voters to retire debt.
- More capital can be afforded. In high growth areas, substantially more facilities can be financed this way (may not be true in low growth areas).

**General Obligation Bonds.** General obligation bonds are backed by the value of the property within the County (full faith and credit). There are two types of general obligation bonds: voter-approved and capital notes. Voter-approved bonds increase the property tax rate, with the increased revenue dedicated to paying principal and interest on the bonds. Capital note bonds are authorized by the vote of the County Council without the need for voter approval. Principal and interest payments for capital note bonds come from general government revenues. This method of bond approval does not utilize a dedicated funding source for paying the bondholders.

**Revenue Bonds.** Revenue bonds differ from the general obligation bonds in that the payment of principal and interest is guaranteed by the revenue stream of the specific utility or facility. A revenue bond carries with it certain accounting requirements and the establishment of a reserve account where a certain amount related to the size of the revenue bond obligation must be maintained.

**Double Barrel Bonds.** “Double barrel bonds” are general obligation bonds that have been approved by the voters and are secured by the backing of the entire County's full faith and credit. However, the principal and interest payments are made out of revenues earned by the utility or facility.

## Local Improvement District Financing (LID)

Local improvement districts are formed to finance capital projects that directly benefit the property owners or developers of the district. Formation of local improvement districts requires the approval of the County Council. Bonds are sold, improvements are made and property is assessed to pay off the debt. Local improvement districts come with different labels. Some of the more commonly used labels are listed below:

- LID - Local improvement district
- RID - Road improvement district
- ULID - Utility local improvement district

## Public Works Trust Fund

The Public Works Trust Fund (PWTF) is a revolving fund administered by the Washington State Department of Community Trade and Economic Development to provide low interest loans to communities for public infrastructure projects. The funds are limited and therefore must be selectively distributed based upon the merit of the projects being considered. The Department of Community Trade and Economic Development has established a series of criteria to rate and prioritize projects for which funding is requested in order to determine which ones receive loan funds.

## Incorporation and Annexation

### Incorporation

Financing capital facilities improvements within a municipality is very different from financing them within the county structure. If Birch Bay were to incorporate, a municipal capital facilities plan would have to be drawn up.

### Annexation

If the City of Blaine was to consider annexation of Birch Bay, the City should conduct a detailed fiscal impact assessment to determine the potential revenues and the estimated capital and operating costs the City would assume after annexation. The annexation proposal does not

necessarily need to show a surplus of revenue on the balance sheet to be considered a desirable annexation. There are other criteria for annexation other than fiscal criteria.

### Relationship to the Community Plan

The Capital Facilities Plan assures the coordination of capital facilities construction and financing. The Birch Bay Community Plan assures the Community's policies regarding land development are carried out. A Community Plan that is kept current provides the overall framework within which the Capital Facilities Plan should operate. The Birch Bay Community Plan not only sets the Community's physical development policy but also its social and economic policy.

Further, the Washington State Growth Management Act requires that capital facilities plans of special purpose districts conform to the Community Plan and that its capital improvements and investments decisions conform to and implement the Community Plan. The Growth Management Act mandated comprehensive and community plans have two major implementation tools. One is Development Regulations, which includes zoning, land development, and critical areas protection and the other is the capital facilities plan.

### Level Of Service Standards

Level of service (LOS) standards are measures of the amount (and/or quality) of the public facility which must be provided to meet that community's basic needs and expectations. Level of service measures are typically expressed as ratios of facility capacity to demand by existing and projected future users.

No two communities are the same. A community's basic needs vary from locale to locale. Also, there is no consensus among urban planners and public works engineers of what constitutes national standards. Further, there is no one standard that measures everything. In most instances there are a number of standards for each service. For example, Fire service standards can be response time, staffing level, equipment mix, fire flow, or a combination thereof. Therefore, comparing Birch Bay's current level of service standards with a set of standards that appear to represent a median value of a greater cross section of communities provides some value but should not be taken as absolute or something that Birch Bay should strive to achieve. Level of service standards are discussed in greater detail in the parks and recreation chapter, the transportation chapter and the utilities chapter. A comparison of level of service standards is shown in Table 17-1.

## CAPITAL FACILITIES PLAN

**Table 17-1**  
**Comparison of Level of Service Standards**

Type of Service	Birch Bay	Other Urban Areas
Parks		
Neighborhood	2.5 acres / 1,000 popul.	1.6 acres / 1,000 popul.
Community	2.5 acres / 1,000 popul.	2.6 acres / 1,000 popul.
Wastewater	150 gallons / household / day	250 gallons / household / day
Water	200 gallons / household / day	300 gallons / day / household
Streets	LOS "D" - Highway Capacity Manual	LOS "C" - Highway Capacity Manual
Storm drainage	100 year flood 2.0 inches in 60 min.	50 year flood 2.0 inches in 90 minutes
Fire	5 minute response time	5 minute response time
Emergency medical services	5 minute response time	4-6 minute response time
Police	1 officer / 5,000 population	1 officer / 1,000 population

## Project Prioritization

Not all worthy projects can be included in the next year's capital facilities program nor can they, in many instances, be carried out over the entire six to twenty year Capital Facilities Plan period. What projects can be included and what projects need to be left out is not an easy process. The decision process is complex and often troublesome, particularly when it comes to funding capital projects out of the County's general fund. Therefore, an annual capital facilities planning process to facilitate capital project prioritization and project selection should be established.

## Parks and Recreation

### Projects

**Terrell Creek Spit.** Acquisition, or preservation through other means, of property at the mouth of Terrell Creek is a major community goal. Because the affected properties include adjacent properties on the east side of Birch Bay Drive, it is recommended that the property be secured as dedicated open space through density bonus or other arrangements. This approach would free funds for other park projects.

**Cottonwood (Halverson) Park.** Working with the Whatcom County Parks and Recreation Department, retain a landscape architect and prepare a development plan and cost estimate for the 4.3 acre Cottonwood neighborhood park. Let a contract for the construction of park amenities.

**Bay Horizon Park.** Working with the Whatcom County Parks and Recreation Department and the Lions Club, install sports fields at the Bay Horizon Park. The area northwest of the community center building is well suited for this type of recreational development. At one time, there were baseball diamonds in existence at that location.

**Sunset Equestrian Park.** Working with the Whatcom County Parks and Recreation Department, retain a consultant to investigate if it would be feasible and desirable to relocate all, or part of, the equestrian park at a new location.

**Coast Millennium Trail.** Join the regional effort to assure that the Coast Millennium Trail gets built through the Birch Bay area. Explore side trails connecting to the parks nature reserve areas.

**Wetlands and Critical Areas Preservation Plan.** Working with the County retain a landscape architect and prepare a plan that identifies major wetlands in the Birch Bay area and connects them with network to pedestrian and bicycle trails.

**Beachfront Promenade.** Working with the appropriate County and State agencies, retain a civil engineer for final design of a promenade and a berm along Birch Bay Drive. Seek State and Federal funding for construction of the berm. Construct the berm and promenade along Birch Bay Drive.

## CAPITAL FACILITIES PLAN

**Community Center.** Working with Whatcom County in evaluating various funding sources, including REET, local improvement districts, rural sales tax, and WA-CERT, the Birch Bay community will pursue the evaluation and purchase of property and the design for a community center to house governmental functions such as law enforcement, County services, post office, library, and meeting places. Consideration should be given to working with the Blaine School District on a combined elementary school and community center campus.

**Public Restrooms and Parking.** Working with Whatcom County Parks, local developers and the Whatcom Transit Authority, acquire a parking lot with public restroom facilities on the upland side of Birch Bay Drive. This facility could provide parking for the Coast Millennium Trail and beach visitors, and also be used for a bus stop and Park-and-Ride lot for commuters.

### Cost and Timing

The estimated cost and timing of carrying out the identified projects is shown in Table 17-2.

### Financing

Funding for the Cottonwood Park, the Bay Horizon Park, the Equestrian Park, the Coast Millennium Trail project and the Wetlands Trail project would come from Whatcom County park funds, supplemented with one or more grants from the State of Washington State Interagency Committee for Outdoor Recreation. The funding for the Berm and the Promenade project will have to be determined.

The Northwest Parks and Recreation District is a potential funding source for Birch Bay recreational facilities. The voters within the District boundaries, which are the same as the Blaine School District, may pass a tax levy for a 6-year period to fund recreation parks or improvements. If a levy of .10 per thousand dollars of valuation were applied to the \$1.4 billion assessed valuation within the District boundaries, it would generate \$1.4 million per year for parks and recreation facilities, maintenance and operation. Over the first 6-year period, the levy could generate \$8.4 million.

## CAPITAL FACILITIES PLAN

**Table 17-2**  
**Parks and Recreation Projects Cost and Timing**  
**In \$1,000**

Project	Total Cost	2002 2007	2008 2013	2014 2022
Cottonwood Park	\$60			
Landscape Plan	15	15		
Construct and equip	45		45	
Bay Horizon Park	\$80	40	40	
Equestrian Park	\$20		20	
Coast Millennium Trail	\$50	10	20	20
Wetlands Trails	\$30	30		
Beachfront Promenade	\$3,020	\$20	1,000	2,000
Community Center	\$1,000		\$1,000	
Parking and Restrooms		\$50		
Total	\$4,310	\$165	\$2,125	\$2,020

## Roads and Transportation

### Projects

The following is a list of road projects as they appear on the Whatcom County 2002-2007 Six-Year Transportation Improvement Program. Some projects listed are outside the Birch Bay Planning area but have a significant impact on the road system in the Planning Area. Therefore, these projects are listed and have been made part of the Birch Bay Capital Facilities Plan.

## CAPITAL FACILITIES PLAN

**Birch Bay - Lynden/Portal Way.** Improve the intersection of Birch Bay - Lynden Road and Portal Way by installing channelization and a traffic signal (0.40 miles).

**Lincoln Road.** Construct Lincoln Road from Shintaffer to Blaine Road or SR-548 (1.74 miles).

**Grandview/Point Whitehorn.** Widen and resurface Grandview Road and Point Whitehorn Road from Birch Bay Drive to Jackson Road (1.48 miles).

**Lincoln Road/Birch Point Connector.** Construct a new road diagonally from Birch Point Road to Semiahmoo Parkway (0.70 miles).

**Birch Bay Drive Sidewalks/Pedestrian Improvements.** Construct pedestrian improvements along Birch Bay Drive from Alderson Road to Harborview Road (1.14 miles).

**Birch Point Road.** Reconstruct Birch Point Road from Semiahmoo Drive to Birch Bay Village (1.58 miles).

**Semiahmoo Drive.** Reconstruct Semiahmoo Drive from Birch Point Road to Blaine City Limits (2.45 miles).

**Loomis Trail Road.** Reconstruct Loomis Trail Road from Blaine Road, SR-548 to Kickerville Road (1.08 miles).

**Harborview Road.** Reconstruct Harborview Road from Lincoln Road to Drayton Harbor Road (0.47 miles).

The following projects are not on Whatcom County 2002-2007 Six-Year Transportation Improvements Program but have been added to the Birch Bay Capital Facilities Plan in order to implement its Transportation Plan.

**Birch Bay - Lynden Road.** Widen Birch Bay-Lynden Road from Harborview Road to Kickerville Road (2.00 miles).

**Beach Access Road.** Construct a new road west from Blaine road, SR-548 to a parking lot east of Birch Bay Drive (0.77 miles).



## CAPITAL FACILITIES PLAN

**Blaine Road, SR-548.** Reconstruct Blaine Road, SR-548 from Grandview Road to California Creek Bridge (4.40 miles).

**Harborview Road.** Reconstruct Harborview Road from Birch Bay Drive to Lincoln Road (1.20 miles).

### Cost and Timing

The estimated cost and timing of carrying out the identified projects is shown in Table 17-3.

### Financing

All projects shown in the year 2002-2007 time period are included in the Whatcom County 2002-2007 Six-Year Transportation Improvements Program and are to be financed by a combination of County Road Funds, State Aid, and developer contributions. Some of the State Aid moneys may come from Federal sources. All projects shown in the 2008-2013 and 2014-2022 time period are to be financed the same way as the 2002-2007 projects, except the \$7,040,000 cost of improving Blaine Road, SR-548 from Grandview Road to California Creek bridge. The Blaine Road improvements are anticipated to be paid by the Washington State Department of Transportation since Blaine Road, SR-548 is a State Highway.

The 2002 County Road levy was \$2.1 per thousand dollar valuation. Applied to Birch Bay's estimated \$440 million valuation, this would generate approximately \$1 million per year, or \$20 million over the 20-year life-time of the plan. A transportation impact fee of \$1,000 per new residential unit assessed on the projected 3,456 additional dwelling units could generate an additional \$3.5 million over the 20-year life of the plan. Other potential funding sources for the proposed projects are: SEPA mitigation fees, Local Improvement Districts, a Road Improvement District, or a Transportation Benefit District.

## CAPITAL FACILITIES PLAN

**Table 17-3**  
**Road Projects Cost and Timing**  
**In \$1,000**

	<b>Total Cost</b>	<b>2002 2007</b>	<b>2008 2013</b>	<b>2014 2022</b>
Birch Bay-Lynden/Portal Way	700	700		
Lincoln Road	3,500	3,500		
Grandview/Point Whitehorn	3,000	3,000		
Birch Point Connector	3,200	3,200		
Birch Bay Drive Sidewalk	300	300		
Birch Point Road	3,000	3,000		
Semiahmoo Drive	5,000	5,000		
Loomis Trail Road	1,500	1,500		
Harborview Road	1,000	1,000		
Birch Bay-Lynden Road	3,200		1,600	1,600
Beach Access Road	1,230			1,230
Blaine Road, SR-548	7,040		3,000	4,040
Harborview Road	2,400		1,000	1,400
<b>TOTAL</b>	<b>\$35,070</b>	<b>\$21,200</b>	<b>\$5,600</b>	<b>\$8,270</b>

## Water

### Projects

The following water system capital improvements that will increase system capacity are identified in the Birch Bay Water and Sewer District's April 2003 Comprehensive Water System Plan. Table 17-4 shows the summary of projects and the amount of funding needed.

**Point Whitehorn Reservoir.** Construct a 200,000 gallon elevated or 600,000 gallon standpipe reservoir at Point Whitehorn and 4,000 linear feet of 8 inch transmission piping .

**Semiahmoo Reservoir.** Construct a 1.2 million gallon elevated or 2.7 million gallon standpipe reservoir approximately 2,000 feet north of existing 500,000 gallon reservoir and 6,000 linear feet of 12 inch transmission mains to new reservoir in the northwest portion of the District.

## CAPITAL FACILITIES PLAN

**Lincoln Road Line.** Construct 3,600 linear feet of 10 inch diameter water main along the currently unimproved section Lincoln Road west of Blaine Road.

**Blaine Road Line .** Construct 5,300 linear feet of 14 inch diameter water main beginning at the intersection of Blaine Road and Lincoln Road, then south along Blaine Road to its intersection with Bay Road.

**Semiahmoo Drive Line.** Construct 9,000 linear feet of 12 inch diameter water main from new Semiahmoo tank to Semiahmoo Way and generally east-west across Cannery Hill.

**Birch Point Road Line.** Construct 8,000 linear feet of 12 inch diameter water main along Birch Point Road and generally around southeast side of Cannery Hill to connect to Semiahmoo Reservoir project.

**Grouse Crescent-Selder Road Line.** Construct approximately 3,200 linear feet of 10 inch diameter water main generally east-west between Grouse Crescent Road and Selder Road, about midway between Lincoln and Anderson Roads.

**Anderson Road Line.** Construct 5,300 linear feet of 10 inch diameter water main along Anderson Road between Blaine Road and Harborview Road.

**Harborview to Shintaffer Line.** Construct approximately 4,000 linear feet of 10 inch diameter water main generally east-west between Harborview Road and Shintaffer Road, about midway between Lincoln and Anderson Roads.

**Sea-links Line.** Construct 2,700 linear feet of 10 inch diameter water main generally east-west between the Sea-links plat and Blaine Road.

## CAPITAL FACILITIES PLAN

**Table 17-4**  
**Water Projects Cost (x 1,000) and Timing**

	<b>Total Cost</b>	<b>2003 2007</b>	<b>2008 2013</b>	<b>2014 2022</b>
Point Whitehorn Reservoir	880		880	
Semiahmoo Reservoir	2,493		2,493	
Lincoln Road Line	252		252	
Blaine Road Line	504	504		
Semiahmoo Drive Line	728		728	
Birch Point Road Line	648		648	
Grouse Crescent Line-	224			224
Anderson Road Line	371		371	
Harborview to Shintaffer Line	280			280
Sea-links Line	189			189
<b>Total</b>	<b>\$6,569</b>	<b>\$504</b>	<b>\$5,372</b>	<b>\$693</b>

*Source: Birch Bay Water and Sewer District*

## Financing

**Growth Driven Improvements.** Growth driven improvements are improvements in the entire water system designed to meet growth generated demand. Growth driven improvements can be waters supply, storage, distribution systems, pumping stations, etc. Funding for growth driven improvements comes from water connection charges. Today, the Birch Bay Water and Sewer District charges \$1,540 per equivalent residential hookup. This is the primary source of funding to pay for growth driven improvements. All costs listed in Table 17-4 are growth driven projects and are paid out of funds generated from water hookup fees.

## Wastewater

### Projects

The October 1999 (updated May 2001) Birch Bay Water and Sewer District's Comprehensive Sewer Plan identifies 55 capital projects that the District needs to undertake in the next twenty year period to continue to

## CAPITAL FACILITIES PLAN

provide sewer services at the current or improved level. The identified 55 projects cost amounts to a total of \$32,824,000. The projects include improvements to the wastewater treatment plant, improvements to pump stations or lift stations and improvements to the sewage collection system. The improvements are designed to accommodate future growth or demand for sewer services and to improve existing system. Improvements to the existing system are often done to reduce maintenance costs. Of the total 55 identified projects, about six projects have been completed since the publication of the Sewer Comprehensive Plan. Further, 16 of the 55 projects, amounting to about \$6,426,000 have been identified to be completed in the 2000-2009 time period.

The Sewer Comprehensive Plan also identifies projects that the district is considering improving in what they call "Special Study Areas." These are areas outside the proposed urban growth area and therefore are not covered in this document.

The Birch Bay Water and Sewer District recently updated it's Sewer Comprehensive Plan.

The sewer element of this capital facilities plan deals only with sewer improvements that have been identified for construction in the 2000-2009 time period. These projects are identified and discussed in some detail below. The projects that would follow in the 2010 to 2022 time period have not been identified in this document but are left to be treated as a total.

The following wastewater system improvements have been identified by the Birch Bay Water and Sewer District to be included in their 2000 to 2009 capital improvements plan. Table 17-5 shows the summary of projects and the amount of funding needed.

**Wastewater Treatment Plant Improvement (1).** Add second fine screen at the wastewater treatment plant.

**Wastewater Treatment Plant Improvement (2).** Replace fixed speed motors with variable speed motors at Pump Station 3.

**Wastewater Treatment Plant Improvement (3).** Conduct a wastewater treatment plant characterization study and an engineering report.

## CAPITAL FACILITIES PLAN

**Wastewater Treatment Plant Improvement (4).** At the wastewater treatment plant, make improvements to the activated sludge aeration and selector basin.

**Planning.** Update the Comprehensive Sewer Plan.

**Birch Point Road Sewer Main (1).** Construct 2,400 feet of 21 inch diameter sewer main beginning 5,023 feet west of Birch Point Road and Selder Road then south 1,400 feet and then west 1,000 feet along Birch Point Road.

**Birch Point Road Sewer Main (2).** Construct 4,220 feet of 21 inch diameter sewer main 923 feet west of Birch Point road and Selder Road then west 4,220 feet parallel to Birch Point Road.

**Birch Point Road Sewer Main (3).** Construct 400 feet of 10 inch diameter parallel sewer main beginning at Birch Point Road and Selder Road then west 400 feet.

**Birch Point Road Sewer Main (4).** Construct 2,300 feet of 21 inch diameter sewer main beginning at Birch Point Road and Selder Road then east along Birch Point Road to Pump Station No. 8.

**Pump Station No. 8 Improvements.** Make interim pump station improvements to upgrade capacity and divert flow to interim force main, 4,200 feet 8 inch diameter force main to pump station nr. 7.

**Pump Station No. 7 Improvements.** Make interim pump station improvements to upgrade capacity and divert flow to interim force main, 3,200 feet 8 inch diameter force main to pump station nr. 6.

**Pump Station No. 6 Improvements.** Make interim pump station improvements to upgrade capacity and divert flow to interim force main, 3,100 feet 8 inch diameter force main to pump station nr. 5.

**Pump Station No. 5 Improvements.** Make interim pump station improvements to upgrade capacity and divert flow to interim force main, 3,000 feet 8 inch diameter force main to pump station nr. 4.

**Pump Station No. 4 Improvements.** Make interim pump station improvements to upgrade capacity and divert flow to interim

## CAPITAL FACILITIES PLAN

force main, 3,000 feet 8 inch diameter force main to pump station number 3.

### **Wastewater Treatment Plant Improvement (5).**

Construct third aeration basin.

### **Wastewater Treatment Plant Improvement (6).**

Construct a gravity thickener.

**Table 17-5  
Sewer Projects Cost and Timing  
In \$1,000**

	Cost	2003 2007	2008 2013	2014 2022
WW Treatment Plant Impr. 1	\$242	\$242		
WW Treatment Plant Impr. 2	300	300		
WW Treatment Plant Impr. 3	50	50		
WW Treatment Plant Impr. 4	521	521		
WW Treatment Plant Impr. 5	279	279		
WW Treatment Plant Impr. 6	350	350		
Planning	60	60		
Birch Point Rd. Sewer Main 1	708	708		
Birch Point Rd. Sewer Main 2	1,245	1,245		
Birch Point Rd. Sewer Main 3	82	82		
Birch Point Rd. Sewer Main 4	679	679		
Pump Station No. 8 Impr.	450	450		
Pump Station No. 7 Impr.	375	375		
Pump Station No. 6 Impr.	365	365		
Pump Station No. 5 Impr.	360	360		
Pump Station No. 4 Impr.	360	360		
<b>Total</b>	<b>\$6,426</b>	<b>\$6,426</b>		

Source: Birch Bay Water and Sewer District

## Financing

There are four general ways to finance the construction of the above identified sewer projects. The four general ways are discussed in some detail below.

**Developer Financing.** Sewer facilities within a residential plat or PUD and within a commercial or industrial development project are financed by the developer. The design and construction of these sewer facilities is carried out in accordance with the District's Developer Project Manual and under the oversight of the District.

**Combination Financing by the District and Developers.** In some situations, the District may ask the developer to oversize a sewer pipe or a lift station, etc. to accommodate potential future flows. In these instances the District may elect to participate directly in financing the project or establish what is called a latecomer agreement. A latecomer agreement allows the developer to initially pay for the oversized facility and later get reimbursed by new development that connects to it and used the oversized capacity.

**Revenue Bonds.** Improvements to the wastewater treatment plant, pump station and major interceptors or mains are considered to be general benefit to the entire District. Therefore, these facilities are often financed by means of revenue bonds. Revenue bonds are sold on an open market to create cash for the District. The District pays back the indebtedness from monthly collection charges from all the District sewer service customers.

**Grant Funds.** From time to time, grant funds become available from the State and Federal governments. Today, the only known programs that are available for sewer projects are: Centennial Clean Water Grant Funds, State Revolving Loan Fund, Farmers Home Administration Funds, and Washington State Public Works Trust Fund Loan Program.

## Stormwater Management

### Projects

Whatcom County Public Works Department does not have any stormwater management projects planned for the 2002-2007 capital



facilities time period. However, the Birch Bay Community Plan should project an expenditure level of at least \$50,000 per year for stormwater management projects.

### Financing

Regional stormwater facilities in Birch Bay could be financed through a Public Facility District or Shellfish Protection District. Public Facility Districts are authorized under RCW 54.16.310, and could be funded through rates and charges for stormwater services or through a tax levy within the district. A tax levy could be a flat rate based on acreage, or could vary based on the land use code and parcel size, or a more detailed inventory of amount of impervious surface on each property. Annual stormwater fees typically range from \$80 per acre for low density residential parcels to \$1,000 per acre for heavily developed parcels. If a stormwater fee of \$100 per acre was applied to the existing developed properties in Birch Bay, it would generate approximately \$147,000 per year. If an average rate of \$100 per acre per year was applied to the all of the net developable residential land in the Birch Bay Urban Growth Area, excluding public facilities, wetlands and open space, it would generate an additional \$73,000 per year as this land develops. If a stormwater fee of \$100 per year was assessed on existing residences, it would generate \$500,000 per year.

Shellfish Protection Districts are authorized under RCW 90.72 for Counties having shellfish tidelands and are intended to respond to nonpoint pollution threats to water quality and shellfish farming or harvesting. A Shellfish Protection District could be funded through tax revenues, charges or rates established in an adopted Shellfish Protection Program or through grants.

The Birch Bay Water and Sewer District could very well take on the stormwater management function. As an alternative, a new special purpose district could be created for the sole purpose of stormwater management.

### Summary

The twenty year capital expenditure needs of the Birch Bay Community amount to \$77,245,000 in year 2002 dollars. The 2004-2009 time period requires an expenditure of \$28,595,000 and the time period, the 2010-2015 requires an expenditure of \$23,648,000 and the 2016-2024 period \$25,002,000. The expenditure rate per annum amounts to about \$3.39 million per year. These cost

## CAPITAL FACILITIES PLAN

estimates are very preliminary and need to be refined when the project begins to approach implementation time. Table 17-6 shows the summary of projects by category and the amount of funding needed.

**Table 17-6**  
**Summary of Projects Cost (x 1,000) and Timing**

<b>Project</b>	<b>Total Cost</b>	<b>2004 2009</b>	<b>2010 2015</b>	<b>2016 2024</b>
Parks and Recreation	\$4,310	\$165	\$2,125	\$2020
Roads and Transportation	35,070	21,200	5,600	8,270
Water	6,569	504	5,372	693
Wastewater	30,346	6,426	10,251	13,669
Stormwater	950	300	300	350
<b>TOTAL</b>	<b>\$77,245</b>	<b>\$28,595</b>	<b>\$23,648</b>	<b>\$25,002</b>

## Concurrency

The Growth Management Act requires that urban services be provided for urban development. The Act further stipulates that development within Cities, Towns and unincorporated urban growth areas be at urban levels of density (typically greater than four housing units per acre). In order to meet the requirements of the Growth Management Act, municipalities and counties must therefore, be able to provide urban services to development throughout their corporate or urban growth area boundaries. Provision of urban services should also be planned for urban growth areas surrounding municipalities, since these areas are designated for urban development and may be annexed.

In order to assure that urban services are provided to all areas of urban level development, coordination between the capital facilities plan and the land use plan becomes a necessity. The capital facilities plan must look at the land use plan and identify those areas planned for development where urban services are not available. In cases where certain urban services are not available, the capital facilities plan must establish a specific program of projects that extend services into those areas.

In certain cases it may be found that urban services cannot be extended into areas planned for urban development. There could be a lack of funding to complete particular projects. Or, projects necessary to expand capacity or service area may require a number of years before they can be

completed. Where it is found that urban services cannot be provided in a timely manner, it becomes necessary to go back and reassess the land use plan. Changes may need to be made in the type of land use planned for particular areas. The size of urban growth areas may also need to be adjusted.

With each update of the capital facilities plan, concurrency with the land use plan should be reexamined. Likewise, whenever changes are proposed to the land use plan, the capital facilities plan must be consulted.

Level of service standards are established to provide a measuring stick by which the adequacy of municipal services can be gauged. It is important that level of service standards be met in order to assure high quality services. As growth occurs, however, maintaining level of service standards becomes a difficult job. Additional growth requires additional capacity to maintain the same quality of services. The County, in managing unincorporated urban growth areas, must continuously expand upon its service capacity to keep pace with growth. Proper management and planning become vital in this process.

If level of service standards are to be maintained as growth occurs, it is necessary for adequate services to be in place to serve new development at the time that they are needed by the new development. This is what is known as concurrency. In order to achieve concurrency, it is necessary to create a balance between growth in service demand and growth in service capacity. If a balance is not achieved, demand for municipal services may outgrow the County's capacity to provide those services. As a result, levels of service will drop.

## Plan Implementation and Update

### Implementation

Implementation of the Capital Facilities Plan rests with each Whatcom County Division and each special purpose district. Once the yearly budget has been adopted by the County Council and the Board of Directors of each special purpose district and the year has commenced, it is the duty of each Division to carry out the programs listed in the Capital Facilities Plan. The Birch Bay Community should be briefed periodically about the status of the major projects.

## Plan Update

**Annual Update.** The plan should be updated annually. The timing of the update should be completed in advance of the commencement of the annual budgeting process. An annual update begins with identifying the needed improvements for each service area that the plan covers. The next step is to identify the highest priority projects. After the projects have been prioritized, available funding must be identified. Once funding has been identified, high priority projects are matched with the available funding. The final step is County Council review and approval.

**Major Update.** Periodically, the entire report needs to be updated. This update should happen every three years or more often if one or more of the following conditions occur:

- I. Unexpected development proposals
- II. Significant revenue shortfall
- III. Significant revenue windfall
- IV. Changes in level of service
- V. New state or federal requirements
- VI. Response to local budget changes

**Update Process.** The County's Director of Planning and Development Services should be assigned the responsibility of keeping the Birch Bay Capital Facilities Plan up-to-date. The Director of Planning and Development Services should convene all other County Division Directors and special purpose district managers as a committee to prepare the annual and major updates of the Birch Bay Capital Facilities Plan.

## Birch Bay Planning Steering Committee Oversight

The Birch Bay Community Planning Steering Committee should exercise its role as the policy directing and oversight body to look after the Birch Bay Capital Facilities Plan. The Steering Committee may elect to engage in evaluating the projects. The Steering Committee may want to pay special attention to those projects identified to be financed out of the County's general fund.

## Review Of Level Of Service Standards

In addition to updating the Capital Facilities Plan, the Steering Committee, with the coordination of the Director of Planning and

Development Services, should periodically review and evaluate the level of service standards.

### **Benchmarking**

Many communities have resorted to a method called “benchmarking”. Benchmarking means a County identifies a number of benchmark conditions such as “percent unemployed” or “mean value of single family residential construction”, etc. Benchmarks are identified and measured at the conclusion of each year. By observing the changes in benchmark conditions, it tells the County whether they are achieving the goals that they have established for themselves. A benchmarking system should be set up for the Birch Bay Community.

### **Action Strategies**

1. The County Council should consider the adoption of a Park Impact Fee ordinance to fund park improvements within the Birch Bay Urban Growth Area.
2. The County Council should consider the adoption of a Transportation Impact Fee Ordinance to fund transportation improvements within the Birch Bay Urban Growth Area.
3. The County Planning and Public Works Departments should work with the Birch Bay Stormwater and Shellfish Protection Committee and Birch Bay Water and Sewer District to establish a Stormwater Utility District or Shellfish Protection District to fund stormwater facilities in the Birch Bay watershed.
4. The County Planning and Parks Department should work with the Natural Resource/ Parks Subcommittee of the Birch Bay Steering Committee, the Northwest Parks and Recreation District and the City of Blaine Parks Board to pursue a tax levy to support parks and recreation services and facilities within the District Boundaries, which includes the City of Blaine.
5. The County and the Birch Bay Public Education, Health and Safety Subcommittee should meet with the Blaine School District to determine whether the District is interested in school impact fees and pursue this option if there is interest.
6. The County Administration should explore the legality of establishing a public facilities reserve fund for the future City of Birch Bay, funded by a portion of the Sales tax or Real Estate Excise Tax collected within the Birch Bay Urban

## **CAPITAL FACILITIES PLAN**

Growth Area. This fund would be available at the time of incorporation to fund capital projects needed to establish a new City.

## Chapter 18

# SITING ESSENTIAL PUBLIC FACILITIES

## Introduction

Essential public facilities are usually capital facilities, typically difficult to site, such as airports, state education facilities, state or regional transportation facilities, state and local correctional facilities, solid waste handling facilities, and in-patient facilities including substance abuse facilities, mental health facilities, group homes, and secure community transition facilities (RCW 36.70A.200).

The County and the cities may also identify additional public facilities that are essential to providing services. Whatcom County is in the process of determining what, if any, additional public facilities should be considered essential. An Essential Public Facilities Advisory Committee has been established and is working with Planning Department staff to make these determinations.

The following outlines a process for determining where essential public facilities could be located and what development standards are appropriate. This process is intended to avoid duplication in approval process, consider the long-term as well as short-term costs of alternative siting criteria, provide for effective public review, major facility location, and emphasize reasonable compatibility with neighboring land uses.

## Locational Considerations

The following locational issues should be taken into consideration when essential public facilities are proposed to be sited in the Birch Bay area:

1. Equitable distribution of public facilities should occur so that no one jurisdiction assumes more than their fair share.
2. Siting issues among Cities, the County, the State, and between the County, State and federal agencies, need to be coordinated to eliminate untimely reviews and delays.
3. The siting of some essential public facilities is limited by the nature of the facilities' operational requirements and the siting requirements of state and federal agencies which need to be taken into account prior to

and during the public review process. Specific siting needs for each type of facility and a need to identify design requirements and standard mitigation techniques should be stated as part of any siting decision.

4. Future expansion of a facility is often determined by the initial siting and design decisions, which need to be acknowledged in the public review process.

## Public Review Process

It is essential that the public will be given an opportunity to review and comment on proposed location, construction and operation of essential public facilities. The following is a list of issues to be addressed in the public review process:

1. Affected public shall be consulted in preparing recommendations and shall be given the opportunity for effective review and comment.
2. Notice and opportunity to review and comment on draft recommendations shall be given to affected public.
3. Proposals for siting essential public facilities shall contain rationale for why that facility is needed.
4. Recommendations for essential public facilities shall contain a rationale for why the facilities listed need to be located in the Birch Bay area.
5. When identifying essential public facilities with siting difficulties, the characteristics of the facility that make it difficult to site shall be indicated.

## Evaluation Information

For the public to be able to review and comment on proposed essential public facility location, construction, and operation, a certain amount of quantifiable information needs to be in the hands of the public. The following is a suggested minimum list of information needed. More detailed and specific information is needed depending on the type of essential public facility proposed.



## **SITING ESSENTIAL PUBLIC FACILITIES**

1. Evaluation criteria shall be consistent in the treatment of siting essential public facilities and should recognize the need for compliance with County wide policies and criteria.
2. Evaluation criteria shall consider more than one site.
3. Siting criteria shall be based on the following and consider the impacts on:
  - a. Natural features and critical areas
  - b. Existing land use and development in adjacent and surrounding areas
  - c. Existing Community Plan designations for surrounding areas
  - d. Present and proposed population density of surrounding areas
  - e. Environmental impacts and opportunities to mitigate environmental impacts
  - f. Effect on critical areas and designated open space areas
  - g. Spin-off (secondary and tertiary) impacts
  - h. Effect on the likelihood of associated development being induced or precluded by the siting of the facility.
  - i. Cumulative impacts essential public facilities taken as a group.

## **Goals and Policies**

GOAL: Assure that essential public facilities sited in the Birch Bay area take into consideration the provisions in the Community Plan.

Policies:

1. When siting essential public facilities, the proposal shall take into account the Birch Bay Community Plan, particularly the land use, housing, transportation, utilities, critical areas, shoreline, and parks and open space elements.

## **SITING ESSENTIAL PUBLIC FACILITIES**

2. Ensure that the siting of essential public facilities will include and provide for a public process with quantifiable information.
3. Ensure that the essential public facilities siting process provides adequate data necessary to evaluate the siting of the proposed facility.

## BIRCH BAY COMMUNITY PLAN – APPENDIX A

# BIRCH BAY TRANSPORTATION PLANNING STUDY

Prepared for:

Whatcom County

January 2009

Prepared by:

Transpo Group, Inc.  
11730 118<sup>th</sup> Avenue NE, Suite 600  
Kirkland, WA 98034-7120  
Phone: 425.821.3665  
Fax: 425.825.8434  
[www.transpogroup.com](http://www.transpogroup.com)

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# Introduction

The Birch Bay area of Whatcom County is located in the northwest corner of Washington State, approximately 21 miles from the county seat of Bellingham and approximately 6 miles south of the Canadian border. Birch Bay is not an incorporated city, and its Urban Growth Area (UGA) remains under the jurisdiction of Whatcom County. The Birch Bay UGA is directly adjacent to the City of Blaine and its UGA. The Birch Bay UGA is centered on Birch Bay, a half-moon shaped bay off of the northern Puget Sound. The UGA extends south toward Grandview Road and north to the Blaine city limits and the city's UGA along Lincoln Road. The easternmost edge of the Birch Bay UGA lies just west of Kickerville Road. Interstate 5 (I-5) runs about 2.5 miles west of the UGA boundary. Blaine Road, also known as SR 548, is a state highway that runs north-south through Birch Bay. The Birch Bay area is illustrated in Figure 1.

The 2000 U.S. Census reported that the population in the Birch Bay Census Designated Place (CDP) is 4,960 people, and the population of the City of Blaine was 3,770 people. Each of these population estimates was notably larger than was reported in the 1990 U.S. Census: when the Birch Bay area had 2,656 people and the City of Blaine had a population of 2,489. Between 1990 and 2000 the Birch Bay population grew by almost 90 percent and the City of Blaine grew by over 50 percent.

Another significant Birch Bay fact reported in the 2000 U.S. Census was that over 50 percent of the housing units were for seasonal, recreational, or occasional use.<sup>1</sup> This statistic is an indicator of a community in which there are more housing units than the population estimates would suggest are necessary.

## Purpose

The Birch Bay Transportation Planning Study provides a link between Whatcom County's Comprehensive Plan, the Birch Bay Community Plan, and the transportation facilities and services needed to support growth over the next 20 years. The Transportation Planning Study focuses on safety, capacity, and operational improvements on state highways, arterials, and collectors serving the Birch Bay area. The Planning Study also identifies pedestrian, bicycle, and transit programs to help meet the overall transportation needs of the community.

The Transportation Planning Study is a key component to the Birch Bay Community Plan. It provides the County and the Birch Bay community with a guide for transportation system improvements to meet existing and future travel needs. It also integrates the community's priorities for transportation improvements with those of Whatcom County and the Washington State Department of Transportation (WSDOT).

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<sup>1</sup> U.S. Census Bureau, Census 2000 Summary File 1, Matrices P1, P3, P4, P8, P9, P12, P13, P17, P18, P19, P20, P23, P27, P28, P33, PCT5, PCT8, PCT11, PCT15, H1, H3, H4, H5, H11, and H12.

## Planning Study Organization

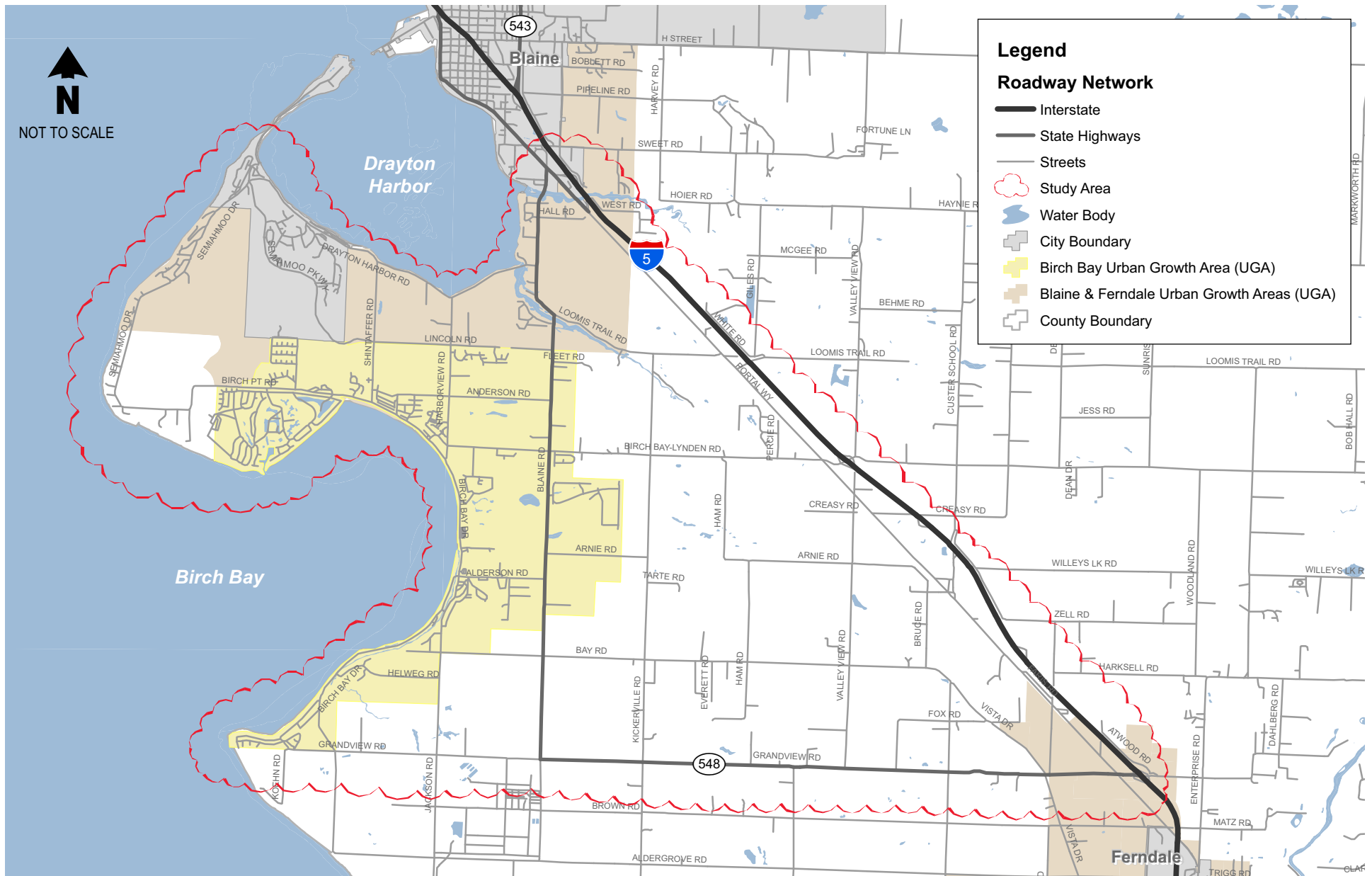
The Transportation Planning Study was developed in a series of tasks to meet the requirements of the GMA. The Planning Study is organized as follows:

- Goals and Policies
- Existing Transportation System Inventory
- Travel Forecasts
- Transportation Systems Plan
- Financial Plan and Implementation Strategies

## Study Area

The Study Area for the Transportation Planning Study includes the Birch Bay UGA, the Blaine UGA, portions of the City of Blaine, and adjacent unincorporated Whatcom County. This area comprises approximately 40 square miles. The Birch Bay UGA has been defined by Whatcom County, and the Blaine UGA has been defined by both the County and the City of Blaine. Figure 1 shows the study area for the 2008 Birch Bay Transportation Planning Study.

As noted above, the Study Area extends beyond the Birch Bay UGA boundary. This larger area accounts for the transportation system serving the Birch Bay UGA, extending to I-5 and to the City of Blaine and its UGA.



**Figure 1**  
**Study Area**

*Birch Bay Transportation Planning Study*





## Public Participation Process

Public participation is a key element of the planning process. Whatcom County developed an outreach strategy to gather input from stakeholders, interested parties, neighboring agencies, and the public on the study. The strategy involved several components to obtain input from members of the community, both at key decision points and throughout the planning process. The goal of the outreach process was to develop a planning study that reflects the priorities of the community.

The public participation process used multiple methods for engaging the community including the following components:

- Open houses
- Project Web page
- Brochure
- Traveling display

Two open houses were held to inform the community about the Study effort, including the purpose of the Transportation Planning Study, and the reasons for updating the Community Plan. Figure 2 illustrates the linear progression of the planning study process.

The first open house, held in June 2007, provided an opportunity for the public to view the results of the existing conditions analysis, provide feedback on their transportation concerns, and learn more about the potential types of improvements that may be considered in Birch Bay. The comments received helped guide the County as it moved forward with developing a list of proposed transportation improvement projects to address these issues.

The second open house occurred in December 2007. Attendees were able to learn about the future condition of the transportation system in Birch Bay, given the expected changes in land use and population growth. Potential improvement projects that may be used to address transportation issues were also presented at this meeting. Appendix A provides summaries of the two open houses including comments received.

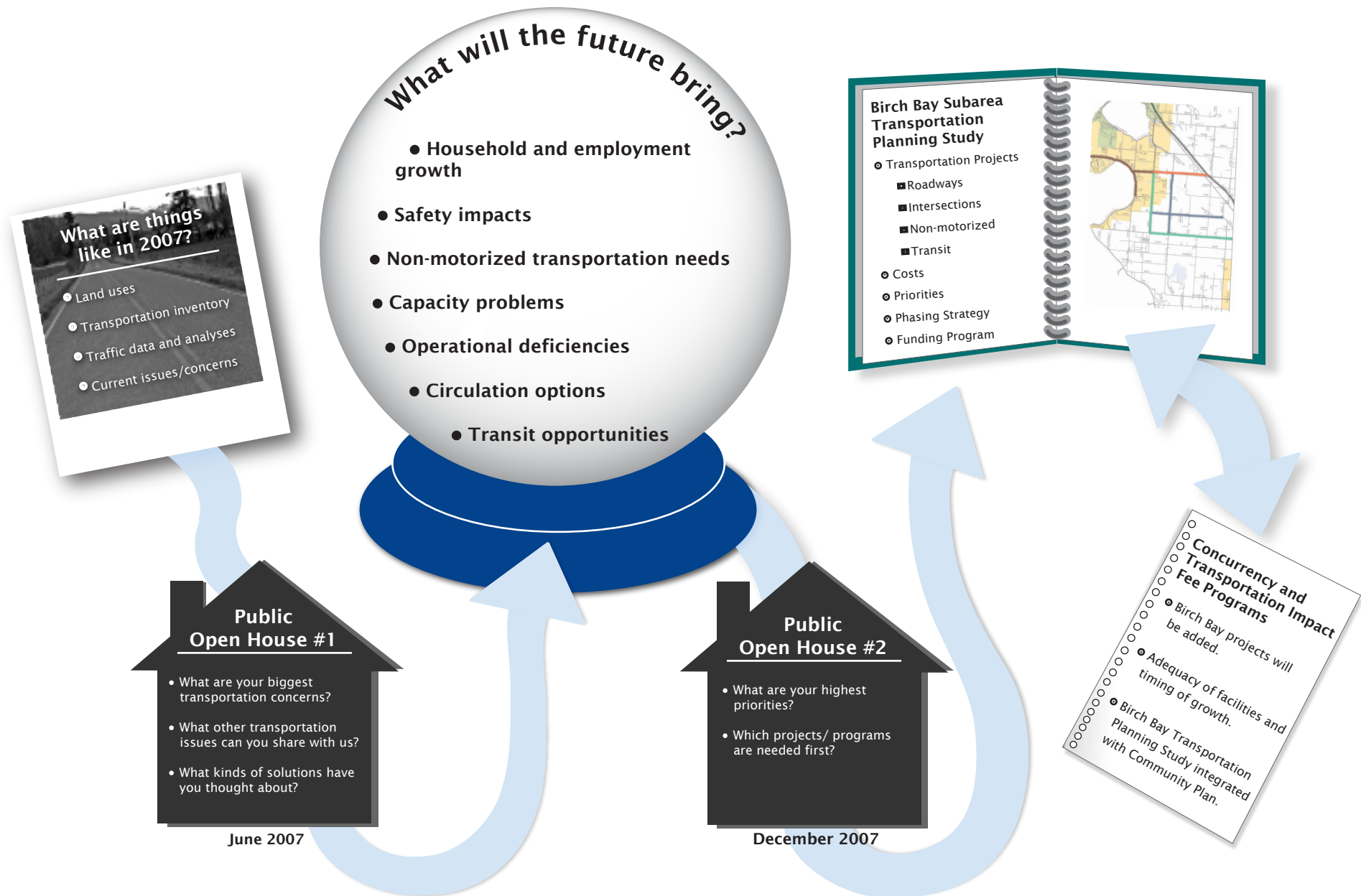
In addition to the two open house events, Whatcom County also hosted a project Web page about the Study, to provide up-to-date project information to a wide audience. The Web page included details about upcoming public events, team contact information, and the project timeline.

Whatcom County also developed and circulated a brochure and traveling display about the Study at locations throughout the Birch Bay and Blaine communities in order to reach those that were unable to attend an open house event, or who do not have internet access. The display and brochure provided information about the potential improvement projects that are being considered for the Birch Bay area, and ways to make a comment or get involved with the Study process.

As a result of these outreach efforts, five primary themes were identified, based on the following community feedback (public participation summaries found in Appendix A):

- East-west connections and access to Interstate-5 should be improved to support traffic circulation and provide for more reliable emergency vehicle access and evacuation routes.

- Speed limits on Birch Bay Drive should be maintained at 20-25 miles per hour year-round, not just during seasonal times.
- Existing roads should be widened to provide for adequate shoulders to improve safety for non-motorized users and allow for a safe place to pull off the road in an emergency without blocking traffic.
- A network of safe bicycle and pedestrian paths to encourage non-motorized travel throughout the Birch Bay community should be incorporated into the Study, along with road improvements.
- The public transportation network should be improved to serve a broader area and increased frequency is also desired.



**Figure 2**  
Plan Background and Process

*Birch Bay Transportation Planning Study*

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# Existing Transportation System Inventory

The transportation system in and around the Birch Bay area consists of various transportation facilities, including state highways, collector routes, local streets, transit services, and pedestrian and bicycle facilities. Information on existing facilities was assembled from various sources. The inventory covers the street system, traffic controls, traffic volumes, traffic operations, traffic safety, transit service, and non-motorized facilities.

## Roadway System and Traffic Controls

### Street Inventory

The following summarizes the existing conditions of roadways serving Birch Bay and surrounding area as of March 2008.

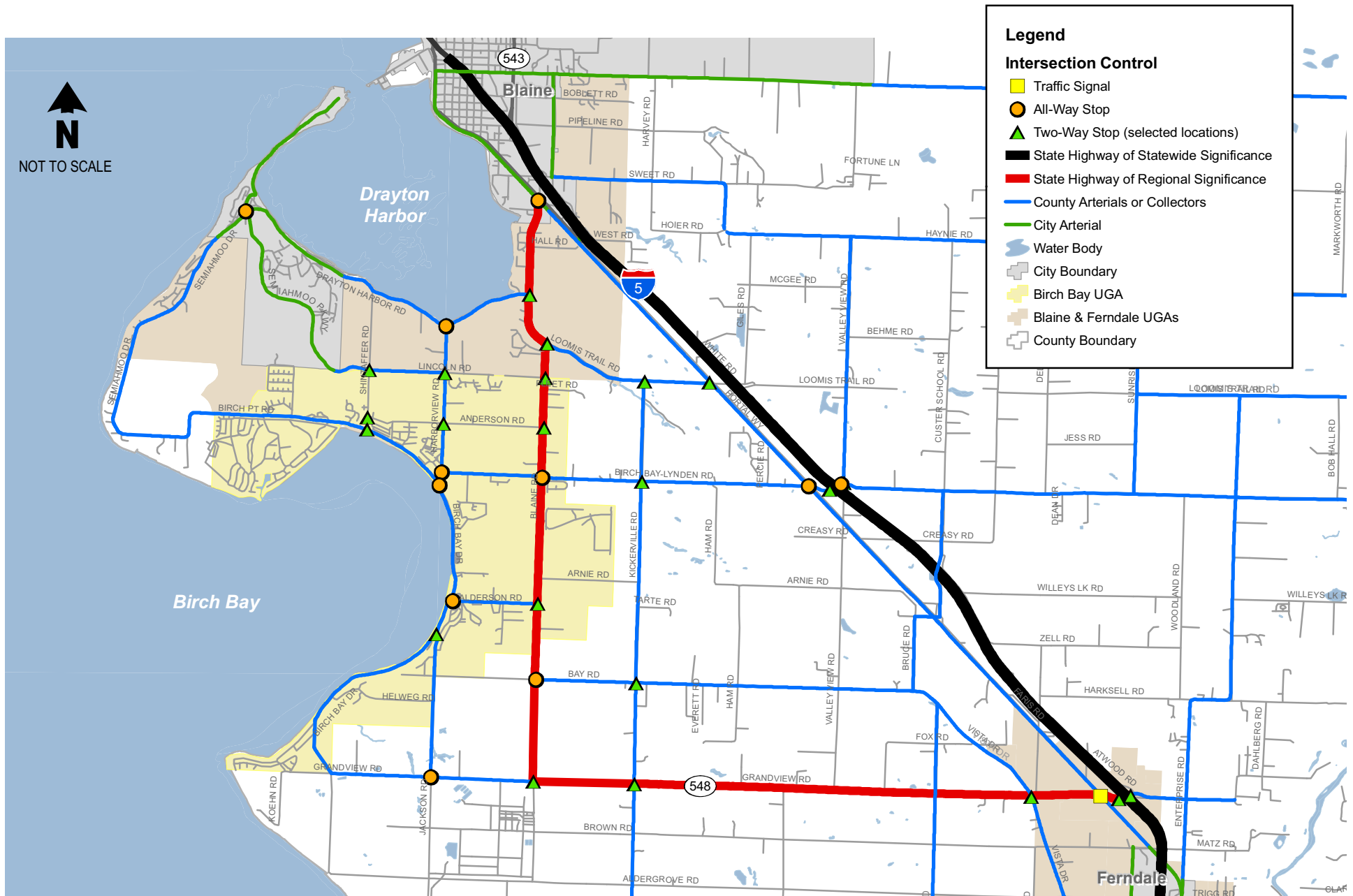
#### *State Highways*

**Interstate 5 (I-5)** is the north-south interstate freeway serving Washington State. It connects to Canada within the City of Blaine. I-5 is classified as a Highway of Statewide Significance (HSS). Within Birch Bay, I-5 runs diagonally from the northwest (in Blaine) to the southeast near the City of Ferndale. I-5 has four travel lanes within the study area and a posted speed limit of 70 mph. Interchanges within the study area are located at Grandview Road (SR 548) and Birch Bay-Lynden Road. An interchange also serves the Birch Bay area at exit 274 in the south part of the City of Blaine.

**SR 548** is a state Highway of Regional Significance (HRS) within the Birch Bay Area. It is comprised of two segments – Blaine Road and Grandview Road.

**Blaine Road (SR 548)** serves major north-south travel flows between the City of Blaine and the industrial areas south of Grandview Road. At its north end it connects with Interstate 5 at an interchange in the south part of the City of Blaine (exit 274). It has two travel lanes and a posted speed limit of 45 mph. The roadway has several small hills due to the rolling terrain. Its lanes are relatively narrow and there is little or no shoulder area.

**Grandview Road (SR 548)** serves as SR 548 east of Blaine Road. It is an east-west, two-lane roadway which connects the south part of the Birch Bay Urban Growth Area with an interchange with Interstate 5 and with an alternative route to Ferndale and Bellingham via Kickerville Road. The lanes are typically between 10 feet and 12 feet wide, and the posted speed limit is 50 mph. Grandview Road has wider shoulders as compared to other roadways in the study area.



**Figure 3**  
Existing Roadway System & Traffic Controls

*Birch Bay Transportation Planning Study*

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### *County Arterials and Collectors*

**Birch Bay-Lynden Road** is the primary east-west road, connecting Birch Bay with I-5. It has two lanes between ten and thirteen feet wide. Generally the minor side streets are stop controlled. However, major streets (Harborview Road, Blaine Road, Portal Way, east I-5 ramps) are all-way stop controlled. Some sections of the roadway have paved shoulders, between three and seven feet in width. There are also nine foot wide gravel shoulders along some sections, while other portions of the roadway have little or no shoulders. The posted speed limit along this road is 50 mph between Blaine Road (SR 548) and I-5. To the west the road connects to Harborview Road and to the east to Guide Meridian Road (SR 539). West of Blaine Road the posted speed limit is 40 mph.

**Birch Bay Drive** is a two lane rural major collector that ties in to Point Whitehorn Road to the south and to Birch Point Road to the north. It provides connections to the Birch Bay Village and Semiahmoo areas. All-way stop signs control traffic flows at major street crossings. The roadway typically has ten foot lanes and four foot wide paved shoulders. The posted speed limit is 20 mph between May 5 and September 15 and 35 mph the remainder of the year. It provides access to developments and activities along the Birch Bay waterfront. Birch Bay Drive experiences significant pedestrian use due to its proximity to the waterfront and the adjacent commercial businesses. The 2000 Birch Bay Economic Development Action Plan emphasized the need for improved pedestrian and bicycle facilities along Birch Bay Drive as part of the community's economic development strategy.

**Birch Point Road** is a major collector that connects to Semiahmoo Drive to the west and Shintaffer Road to the east. It serves as an extension of Birch Bay Drive and provides connections to and from the Birch Bay Village development. The roadway has two travel lanes. Lane widths are typically 10 to 11 feet in width; a section of the road near Birch Bay Village has narrower travel lanes. Some portions of the roadway have gravel shoulders, ranging between three feet and eight feet wide, and the other portions have paved shoulders ranging between four and six feet wide. The posted speed limit is 30 mph and 45 mph.

**Semiahmoo Drive** links Birch Point Road to the south and Drayton Harbor Road and Semiahmoo Parkway to the north. It is a two lane collector with travel lanes typically 10 feet wide. The posted speed limit is 45 mph.

**Lincoln Road** is a two lane collector that connects to the west with Semiahmoo Parkway and to the east with Harborview Road. Lincoln Road has a missing segment between Harborview Road and Blaine Road. Travel lanes (combined with paved shoulders) along this road range between nine and seventeen feet in width. There is not striped delineation between the travel lanes and paved shoulders. The posted speed limit is 35 mph. Along most sections of the roadway there no shoulders, with a small section between the Blaine City Limits and Shintaffer Road having gravel shoulders. Lincoln Road forms the boundary between the Blaine and Birch Bay UGAs.

**Shintaffer Road** is classified as a major collector between Birch Bay Drive and Lincoln Road in the Birch Bay UGA; north of Lincoln Road, in the Blaine UGA, it is classified as a local street. It has two lanes of travel ranging between nine and thirteen feet in width. There are narrow gravel shoulders (1 to 2 feet wide) on both sides, about one to two feet wide. The posted speed limit on this roadway is 35 mph. It connects Drayton Harbor Road to the north with Birch Bay Drive to the south.

**Harborview Road** is a two lane major collector roadway with eleven foot lanes along the majority of the roadway and seventeen foot lanes (combined with paved shoulders) near Drayton Harbor Road. There is not striped delineation between the travel lanes and paved shoulders. Along sections of the roadway there are paved shoulders up to five feet in width. There are also gravel shoulders along other sections ranging between four and six feet wide, while other portions of the roadway have no shoulders. To the north it connects with Drayton Harbor Road and to the south it connects to Birch Bay Drive. The posted speed limit along this road is 40 mph.

**Drayton Harbor Road** is classified as a city arterial within the Blaine city limits, as a rural minor collector between the Blaine city limits and Harborview Road, and as a rural major collector from Harborview Road to Blaine Road (SR 548). It has two travel lanes between ten and eleven feet wide with primarily unpaved gravel shoulders ranging between three and six feet wide. The speed limit is 25 mph west of Harborview Road and 45 mph between Harborview Road and Blaine Road.

**Grandview Road** (west of Blaine Road (SR 548)) is a two lane roadway with ten to twelve foot wide travel lanes. There are gravel shoulders on both sides, ranging between three and eight feet in width. It connects to Point Whitehorn Road and local development west of Blaine Road, then to I-5 via SR 548 (Grandview Road). The posted speed limit along this road is 35 mph.

**Point Whitehorn Road** has two lanes of travel that are approximately ten feet in width. Three-foot wide gravel shoulders are on both sides of the roadway and the posted speed limit is 35 mph. This street connects Birch Bay Drive to the north with Grandview Road to the south.

**Kickerville Road** is a two lane roadway with travel lanes that vary between ten and eleven feet wide. Generally the road has five foot gravel shoulders on both sides. To the north it connects with Loomis Trail Road and to the south it connects to Bay Road. Kickerville Road continues on as a major collector to Rainbow Road. The posted speed limit along this road is 35 mph north of Grandview Road and 45 mph south of Grandview.

**Bay Road** is classified as a major collector between Kickerville Road and Blaine Road and a minor collector between Kickerville Road and Vista Drive. This roadway has two lanes of travel ranging between eight and eleven feet in width. Most of the shoulders are gravel and range from two feet to five feet in width. The section of road west of Jackson Road (which is currently classified as a local street) has three-foot wide paved shoulders. The posted speed limit on this roadway is 35 mph west of Blaine Road, 50 mph between Blaine Road and Valley View Road, and 45 mph east of Valley View. It connects Blaine Road (SR 548) to the west with Vista Drive and Bruce Road to the east.

**Jackson Road** is a collector that has two lanes of travel ranging between nine and fifteen feet in width. Some portions of the roadway have gravel shoulders, ranging between two and three feet in width, and the other portions have paved shoulders ranging between four and seven feet wide. The posted speed limit on this roadway is 40 mph north of Grandview Road and 35 mph south of Grandview. It connects Birch Bay Drive to the north with Grandview Road and Henry Road to the south.

**Alderson Road** is a two lane rural minor collector with eleven foot lanes and a posted speed limit of 35 mph. Along most sections of the roadway there are paved four-foot shoulders, with a small section near Birch Bay Drive having little to no shoulders. To the east it



connects with the Blaine Road (SR 548) and to the west it connects to Birch Bay Drive. It provides local east-west connectivity in the center part of the Birch Bay UGA.

**Loomis Trail Road** is a two-lane collector. It connects Blaine Road (SR 548) with Portal Way. It has 10 to 11 foot travel lanes and shoulders ranging in width from 0 to 6 feet. Its posted speed limit is 35 mph.

**Vista Drive** serves as an extension of Bay Road between Bruce Road and Grandview Road. It has limited gravel shoulders and a posted speed limit of 45 mph.

Other rural minor collectors in the study area include **Olson Road** and **Bruce Road/Custer School Road**.

### *Local Access Roads*

The remaining routes are local access roads. These streets serve local abutting land uses and neighborhood traffic. They provide access between residential or business areas and the arterials. They generally have two travel lanes and 25-mph speed limits.

## **Traffic Volumes**

Daily and PM peak hour traffic volumes were collected from a variety of sources including Whatcom County, Washington State Department of Transportation (WSDOT), and Whatcom Council of Governments (WCOG). These traffic volumes were supplemented with existing PM peak hour turning movement counts conducted for the study update in 2006 and 2007. The existing PM peak hour volumes are shown in Figure 4.

### *North-South Roadways*

I-5 is a north-south roadway with high PM peak hour volumes, particularly in the Birch Bay Area. According to WSDOT, weekday PM peak hour volumes (in both directions) range from approximately 2,200 to 2,700 vehicles per hour (vph). Northbound traffic accounts for approximately 50 to 70 percent of the traffic on I-5 during the PM peak hour. Northbound volumes during the PM peak hour are approximately 1,400 vph.

Blaine Road (SR 548) is another north-south roadway with relatively significant PM peak hour volumes. A primary reason for the high volumes is that Blaine Road connects to I-5 and to the City of Blaine. The northern portion of Blaine Road between Birch Bay-Lynden Road and Drayton Harbor Road has a two-way PM peak hour traffic volume of 245 vph. North of Drayton Harbor Road the volumes increase to 635 vph showing the influence of travel from the Semiahmoo area of the City of Blaine. The southern portion of Blaine Road has a PM peak hour traffic volume of 230 vph. The Blaine Road corridor, within the study area, has a two-way PM peak hour traffic volume of 435 vph, 57 percent in the northbound direction and 43 percent southbound in the southbound direction.

Portal Way is a roadway that runs parallel to I-5. Portal Way's intersections with east-west arterials experience relatively high traffic volumes. For example, the intersection of Portal Way and Birch Bay-Lynden Road has an entering PM peak hour volume of 1,150 vph. Between Loomis Trail Road and Grandview Road, the Portal Way corridor has a two-way PM peak hour traffic volume of 200 vph, 65 percent traveling in the northbound and 35 percent traveling in the southbound direction.



Harborview Road runs north-south between Birch Bay Drive and Drayton Harbor Road. PM peak hour volumes range from 385 vph on the northern portion of the road to 700 vph south of Birch Bay-Lynden Road. Most of the vehicles on this southern section are southbound (58 percent) during the PM peak hour reflecting traffic accessing Birch Bay Drive. High traffic volumes in this location contribute to a decreased intersection level of service (LOS), as discussed below in the Traffic Operations section.

Birch Bay Drive is a north-south roadway that follows the edge of the Birch Bay waterfront. The highest traffic volumes on Birch Bay Drive are found just south of Harborview Drive, with 410 vph. Just north of Alderson Road, the two-way PM peak hour volumes decrease to less than 200 vph. South of Alderson Road the volumes decline to less than 50 vph during the PM peak hour.

Most other north-south roads in the study area have total two-way volumes of 150 vph or less.

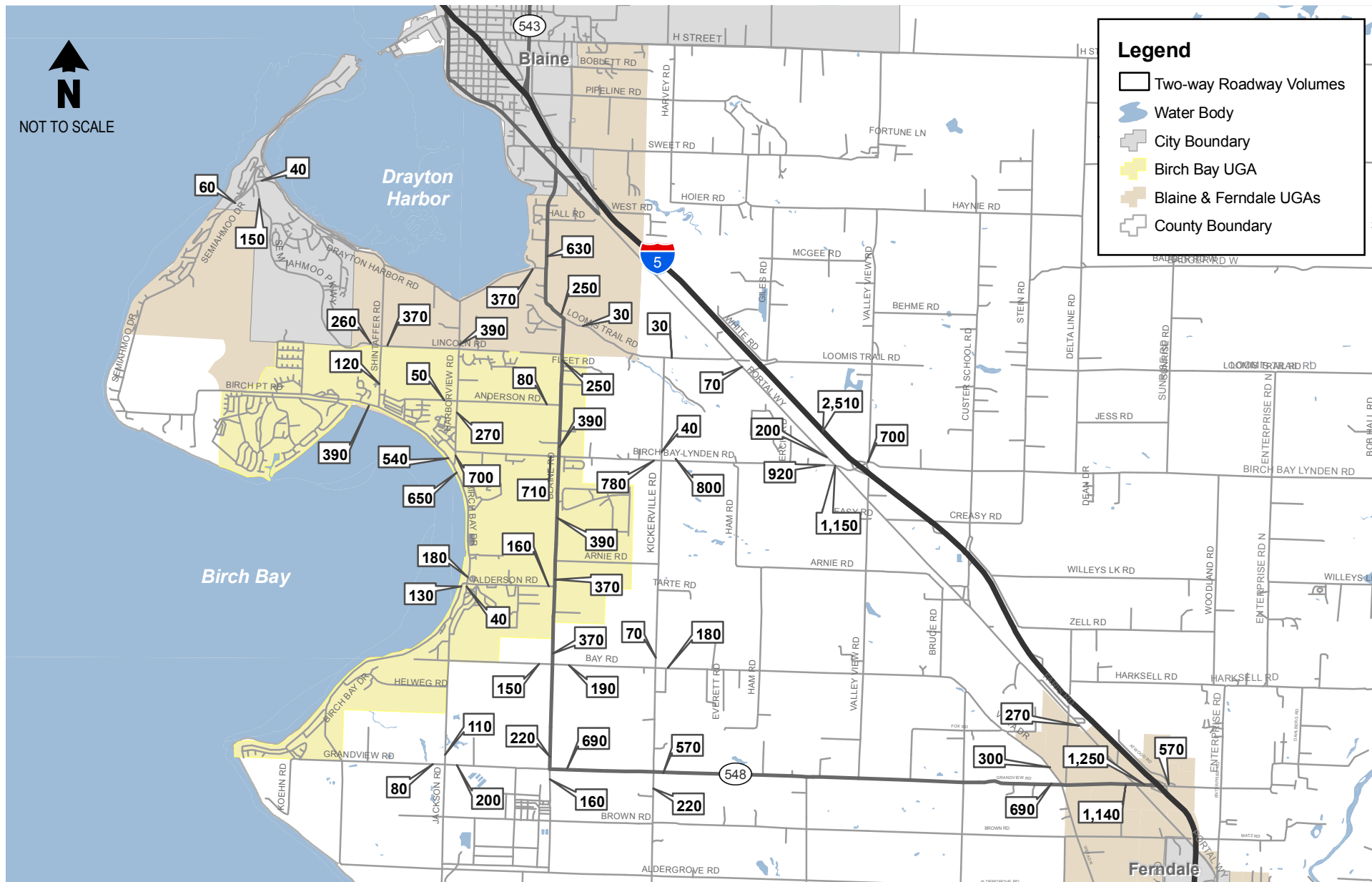
### *East-West Roadways*

Birch Bay-Lynden Road and Grandview Road (SR 548) provide access to and from the Birch Bay area from I-5. Therefore, they carry the highest traffic volumes (except for I-5) within the study area.

Birch Bay-Lynden Road between Harborview Road and I-5 has between 705 and 920 vph in the PM peak hour. In general, westbound traffic volumes represent approximately 60 percent of the total traffic during the PM peak hour.

Grandview Road connects the Birch Bay area to I-5 south of Birch Bay-Lynden Road. Between Blaine Road and I-5 the two-way volumes range from 690 to 1,250 vph. Westbound traffic in the corridor represents only 20 to 40 percent of the total PM peak hour traffic. West of Blaine Road, the volumes in the corridor are significantly lower, ranging from less than 100 vph to up to 200 vph. The notable directional split of PM peak hour traffic along Grandview Road is directly related to the proximity to the Cherry Point Refinery, located south of the roadway. The majority of this traffic is oriented eastbound towards I-5.

A third major east-west route is Bay Road. This roadway is classified as a major and minor rural collector. It carries between 145 and 175 vph between Blaine Road and Kickerville Road during the PM peak hour. Bay Road is an alternative connector to I-5. In general, westbound traffic volumes represents over 60 percent of the total traffic during the PM peak hour.



**Figure 4**  
**2007 PM Peak Hour Two-Way Traffic Volumes**

Birch Bay Transportation Planning Study

M:\06\06229 Whatcom County Concurrency Management\GIS\Figures\9.28.07-Birch Bay\FIG 3 Exist Pk Hr Vols Landscape 11.16.07.mxd



## Traffic Operations

Traffic operations for an intersection can be described alphabetically with a range of levels of service (LOS). LOS A indicates free-flowing traffic and LOS F indicating extreme congestion and long vehicle delays.

Whatcom County's Comprehensive Plan establishes the following level of service standards for roadway segments for purposes of transportation concurrency evaluation (see Table 1). Under state law, the county cannot approve any development that would generate enough traffic to cause the level of service on county arterials and collectors to fall below the adopted standards.

**Table 1. Whatcom County Level of Service Standards (Concurrency)**

Arterial Location	Maximum V/C <sup>1</sup> ratio	Level of Service Standard
Outside Urban Growth Area except Primary Routes	0.75	C
Inside County Urban Growth Area (Birch Bay UGA)	0.80	C
Inside City Urban Growth Area (Blaine UGA)	0.90	D

1. Volume-to-capacity

State highways have a separate standard that is set by WSDOT and the Regional Transportation Planning Organization (RTPO). Highways of Statewide Significance (HSS) within urban areas, such as sections of I-5, have a LOS threshold of LOS D. In rural areas, the HSS LOS is set at LOS C (per state law, HSS are not subject to local concurrency requirements). The LOS for Highways of Regional Significance (HRS), such as Blaine Road (SR 548), is set at the LOS adopted by the local metropolitan planning organization (MPO). The MPO/RTPO for Whatcom County is the Whatcom Council of Governments (WCOG).

Currently the LOS standard for HRS within urban areas is set at LOS D. Outside of urban areas, the HRS LOS standard is LOS C. WSDOT and WCOG plan to continue to discuss the LOS standards for state highways of regional significance and their application to local agency concurrency programs.

SEPA is typically used to review impacts within the immediate and nearby vicinity, such as vehicular access points, frontage right-of-way improvements and nearby intersections or roadways. SEPA uses the "significant adverse environmental impact" standard as the threshold for triggering mitigation. SEPA can be based on level of service standards different than concurrency. Evaluating traffic operations at intersections provides a nationally recognized and locally accepted method of measuring traffic flow and congestion.

Traffic operations analyses were conducted at the study area intersections to evaluate the current traffic characteristics of the existing roadway system. Individual intersection levels of service (LOS) were calculated at the study area intersections. The LOS analysis methodology was based on procedures identified in the *Highway Capacity Manual* (HCM 2000), and was evaluated using Synchro v.6.0. Level of Service (LOS) is measured in total vehicle delay on the worst movement for unsignalized intersections. Appendix B summarizes the HCM level of service definitions.

Table 2 summarizes the existing weekday PM peak hour LOS at study intersections. The detailed LOS worksheets are included in Appendix C.

**Table 2. 2007 Weekday PM Peak Hour Intersection Level of Service**

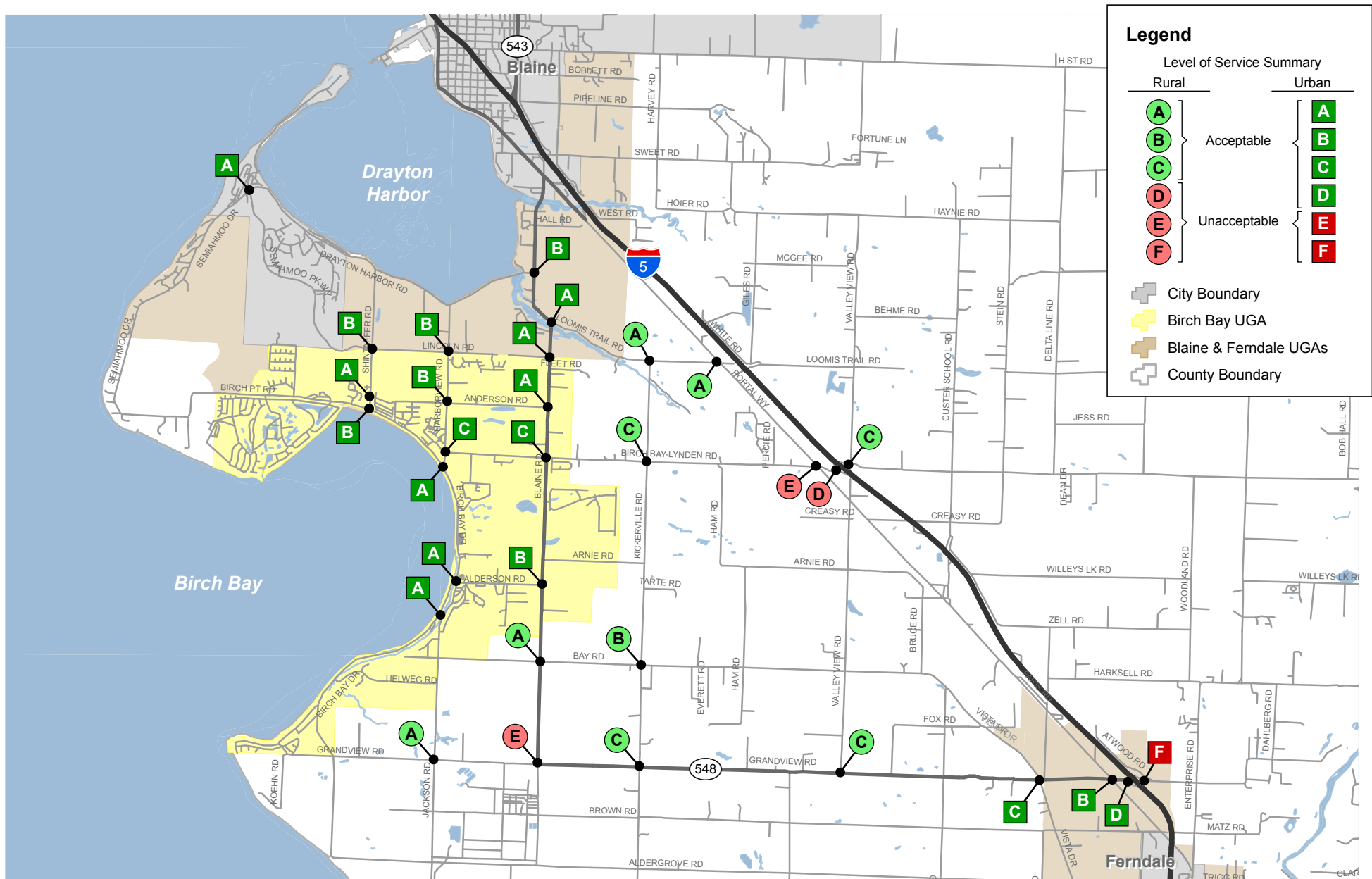
Intersection	Urban or Rural	Intersection Control <sup>1</sup>	2007		
			LOS <sup>2</sup>	Delay <sup>3</sup>	WM <sup>4</sup>
I-5 NB Ramps / Birch Bay–Lynden Road	Rural	AWSC	C	21.6	–
I-5 SB Ramps / Birch Bay–Lynden Road	Rural	TWSC	D	33.9	SB
I-5 NB Ramps / Grandview Road (SR 548)	Urban	TWSC	F	75.2	NB
I-5 SB Ramps / Grandview Road (SR 548)	Urban	TWSC	D	31.4	SB
Blaine Road (SR 548) / Drayton Harbor Road	Urban	TWSC	B	13.6	EB
Blaine Road (SR 548) / Loomis Trail Road	Urban	TWSC	A	8.6	WB
Blaine Road (SR 548) / Lincoln Road	Urban	TWSC	A	10.0	EB
Blaine Road (SR 548) / Anderson Road	Urban	TWSC	A	9.7	EB
Blaine Road (SR 548) / Birch Bay–Lynden Road	Urban	AWSC	C	19.7	–
Blaine Road (SR 548) / Alderson Road	Urban	TWSC	B	11.2	EB
Blaine Road (SR 548) / Bay Road	Rural	AWSC	A	8.3	–
Blaine Road (SR 548) / Grandview Road (SR 548)	Rural	TWSC	E	38.0	SB
Semiahmoo Parkway / Drayton Harbor Road	Urban	AWSC	A	7.6	–
Shintaffer Road / Semiahmoo Parkway (Lincoln Road)	Urban	TWSC	B	13.1	SB
Shintaffer Road / Anderson Road	Urban	TWSC	A	9.2	WB
Shintaffer Road / Birch Bay Drive	Urban	TWSC	B	10.2	SB
Harborview Road / Lincoln Road	Urban	TWSC	B	12.9	EBL
Harborview Road / Anderson Road	Urban	TWSC	B	11.3	EB
Harborview Road / Birch Bay–Lynden Road	Urban	AWSC	C	16.0	–
Harborview Road / Birch Bay Drive	Urban	AWSC	A	9.2	–
Birch Bay Drive / Alderson Road	Urban	AWSC	A	7.6	–
Birch Bay Drive / Jackson Road	Urban	TWSC	A	9.2	WBL
Jackson Road / Grandview Road	Rural	AWSC	A	7.6	–
Kickerville Road / Loomis Trail Road	Rural	TWSC	A	8.7	NB
Kickerville Road / Birch Bay–Lynden Road	Rural	TWSC	C	17.4	SB
Kickerville Road / Bay Road	Rural	TWSC	B	10.6	NB
Kickerville Road / Grandview Road (SR 548)	Rural	TWSC	C	23.4	NB
Portal Way / Loomis Trail Road	Rural	TWSC	A	8.4	EB
Portal Way / Birch Bay–Lynden Road	Rural	AWSC	E	35.4	–
Portal Way / Grandview Road (SR 548)	Urban	Signal	B	13.3	0.54
Vista Drive / Grandview Road (SR 548)	Urban	AWSC	C	19.1	–
Valley View Road / Birch Bay–Lynden Road	Rural	TWSC	B	11.7	SB

1. Signal = Traffic Signal; AWSC = All-Way Stop Control; TWSC = Two-Way Stop Control.

2. Level of service, based on 2000 Highway Capacity Manual methodology. Shaded cells indicate intersections exceeding Whatcom County LOS standard: LOS D in urban locations (within city limits or UGA) & LOS C in rural locations (non-UGA).

3. Average delay in seconds per vehicle.

4. Worst movement reported for unsignalized intersections.



**Figure 5**  
 2007 Weekday PM Peak Hour Intersection Level of Service  
 Birch Bay Transportation Planning Study



As shown in Table 2, all but four study intersections are currently operating at the respective LOS standard or better during the weekday PM peak hour. The exceptions are:

The location exceeding the urban LOS standard (LOS D):

- I-5 NB Ramps / Grandview Road (SR 548) – operating at LOS F

Locations exceeding the rural LOS standard (LOS C):

- I-5 SB Ramps / Birch Bay Lynden Road – operating at LOS D
- Blaine Road (SR 548) / Grandview Road (SR 548) – operating at LOS E
- Portal Way / Birch Bay-Lynden Road – operating at LOS E

Birch Bay-Lynden Road carries the highest traffic volumes in the area, contributing to the level of service deficiencies observed in existing conditions. The high traffic volumes during peak hours limit the gaps available for side street traffic to turn onto Birch Bay-Lynden Road.

## **Traffic Safety**

Whatcom County provided traffic collision data for the roadways in the Birch Bay study area. This area has several notable traffic collision locations. Based on reported collision data between January 1, 2003, and December 31, 2005, there were a total of 213 collisions within the greater Birch Bay study area. Most of the collisions involved single vehicles running off the road or hitting fixed objects. There were three collisions involving bicycles and two involving pedestrians. There were three fatality collisions which resulted in four fatalities within the study area during this three year period. This section further describes the locations and types of collisions.

There were many types of collisions in the Birch Bay area; however single vehicle/fixed object collisions were the majority. Another common collision type is multi-vehicle/rear-end collisions. This type of collision was more than 10 percent of total collisions. Both of these collision types had contributing circumstances of “exceeding reasonable safe speed.”

Over the three years of data collection, there were three traffic collisions that resulted in fatalities, approximately 1 percent of total collisions within the county. A collision in 2005 on Birch Bay Drive between Cottonwood Drive and Beachway Drive resulted in two fatalities. A collision in 2004 on Alderson Road, west of Blaine Road had one fatality, as did a collision on Kickerville Road, south of Arnie Road in 2005. Of the remaining 210 traffic collisions, there were 71 incidents that resulted in injuries and 139 collisions without injuries.

The Birch Bay area includes a segment of Grandview Road (SR 548) classified by WSDOT as a high accident location (HAL); this segment of approximately 1,500 feet is located near the Kickerville Road intersection. HALs are typically evaluated to identify if there are particular issues that can be improved to reduce collisions. Based on the data available for the 2008 Study update, no accidents were reported within this HAL segment between 2003 and 2005.

### *Roadway Segment Analysis*

Within the January 2003 and December 2005 time period, the section of roadway with the highest number of traffic collisions was Birch Bay-Lynden Road between Blaine Road (SR 548) and Kickerville Road; this section had nine collisions. The next highest number of collisions was on Birch Bay-Lynden Road between Valley View Road and Custer School Road, with eight collisions. Three other roadway sections also had eight collisions: Birch Bay-Lynden Road from Kickerville Road to Pierce Road; Birch Bay-Lynden Road from Harborview Road to Blaine Road (SR 548); and on Bay Road between Blaine Road (SR 548) and Bruce Road. Birch Bay-Lynden Road has two intersections with a deficient level of service, which indicate high levels of peak hour traffic volumes (these intersections are at Portal Way and Harborview Road). Table 3 summarizes these roadway segments with collision locations.

There were three pedestrian-related collisions within the January 2003-to-December 2005 time period. There were no fatalities, but each collision involved a vehicle hitting a pedestrian. Two of these incidents were on Birch Bay Drive: one took place approximately 480 feet northeast of the intersection with Jackson Road, and one occurred approximately 680 feet northwest of the intersection with Harborview Road. The third pedestrian-related collision on a roadway in the Birch Bay area was on Birch Bay-Lynden Road, approximately 160 feet west of the intersection with Blaine Road (SR 548).

**Table 3. Birch Bay Collision Locations: Roadways**

Roadway	Limits	Primary Collision Type	Number of Collisions 2003 to 2005
Birch Bay-Lynden Road	Blaine Road (SR 548) to Kickerville Road	Fixed Object	9
Birch Bay-Lynden Road	Valley View Road to Custer School Road	Fixed Object	8
Birch Bay-Lynden Road	Kickerville Road to Percie Road	Fixed Object	8
Birch Bay-Lynden Road	Harborview Road to Blaine Road (SR 548)	Fixed Object	8
Bay Road	Blaine Road (SR 548) to Bruce Road	Entering Driveway	8

Source: Washington State Department of Transportation (WSDOT)

### *Intersection Analysis*

The intersection in the Birch Bay area with the most traffic collisions between 2003 and 2005 is at Birch Bay-Lynden Road and Custer School Road, with seven collisions. This intersection is located just east of I-5. The majority of the accidents at this intersection involved traffic entering from the side street. The intersection with the next highest number of collisions is Birch Bay-Lynden Road and Portal Way with five collisions during three years. This intersection is located just west of I-5. It has relatively high traffic volumes, and operates at LOS E, indicating peak hour congestion and delays. Rear-end accidents were the primary type of collision. Table 4 lists these intersections. There were no pedestrian or bicycle related collisions at intersections in the Birch Bay area during the 2003 to 2005 time period.

**Table 4. Birch Bay Collision Locations: Intersections**

Intersection	Primary Collision Type	Number of Collisions 2003–2005
Birch Bay–Lynden Road / Custer School Road	Entering at Angle	7
Birch Bay–Lynden Road / Portal Way	Rear End	5

Source: Washington State Department of Transportation (WSDOT)

## Transit and Public Transportation

The public transportation agency in the Birch Bay area is Whatcom Transportation Authority (WTA). WTA offers several services for local residents and visitors to make trips throughout the county. Typical fixed route service is available in the Birch Bay area, although its frequencies do not necessarily provide for regular commuting. WTA fills this gap with other services such as Rideshare or Dial-a-Ride. This section describes the existing transit service in Birch Bay, including transit routes, stops, ridership, and the County's ridesharing program.

The following types of transit service are available in Birch Bay:

- Fixed route service (Routes 55, 70X)
- Dial-a-Ride, or Flex service
- Paratransit
- Rideshare, including vanpools

### Fixed Route Service

WTA's fixed route service includes Route 70X, which is an express service between Birch Bay and Bellingham. The route has two stops in the Birch Bay area (at Birch Bay–Lynden Road and I-5 to serve Birch Bay Square and Grandview Road and I-5 to serve the Grandview Industrial Park). Route 70X makes four round trips per day on weekdays between 6:00 AM and approximately 7:00 PM. Saturday service for Route 70X is provided by Route 55, which is the other fixed route service.

Route 55 serves as a connector route between Blaine, Birch Bay, Ferndale, and the Bellis Fair mall in Bellingham. This route makes three round trips per day, in addition to making "flex" deviations along the route for previously requested stops by individual users. Route 55 runs between 8:40 AM and approximately 4:00 PM on weekdays, and between 8:40 AM and approximately 6:00 PM on Saturdays. See Figure 6 for a map of these routes.

WTA tracks the ridership on these two fixed routes. Ridership on Route 55 is tracked at each bus stop and also by travel direction. Recent average monthly ridership data (March to June 2007) show that northbound ridership to Birch Bay includes 30 passengers boarding and 158 passengers alighting. Southbound ridership to Bellingham includes 183 passengers boarding and 23 passengers alighting. This pattern reflects the attractions of jobs and major commercial land uses in Bellingham.

The average monthly ridership on Route 70X includes 536 southbound passengers that are boarding, and no southbound passengers that are alighting (Southbound passengers who



board in Blaine do not typically alight in Birch Bay). For northbound passengers, there are 158 boarding and 480 alighting. The details of both routes' ridership are outlined in Table 5.

**Table 5. Existing Transit Ridership for WTA Routes 55 and 70X**

Route	2007 Average Monthly Ridership <sup>1</sup>	
	On	Off
<i>Route 55</i>		
Northbound (to Birch Bay/Blaine)	30	158
Southbound (to Bellingham)	183	23
Total	213	181
<i>Route 70X</i>		
Northbound (to Blaine)	158	480
Southbound (to Bellingham)	536	0
Total	694	480

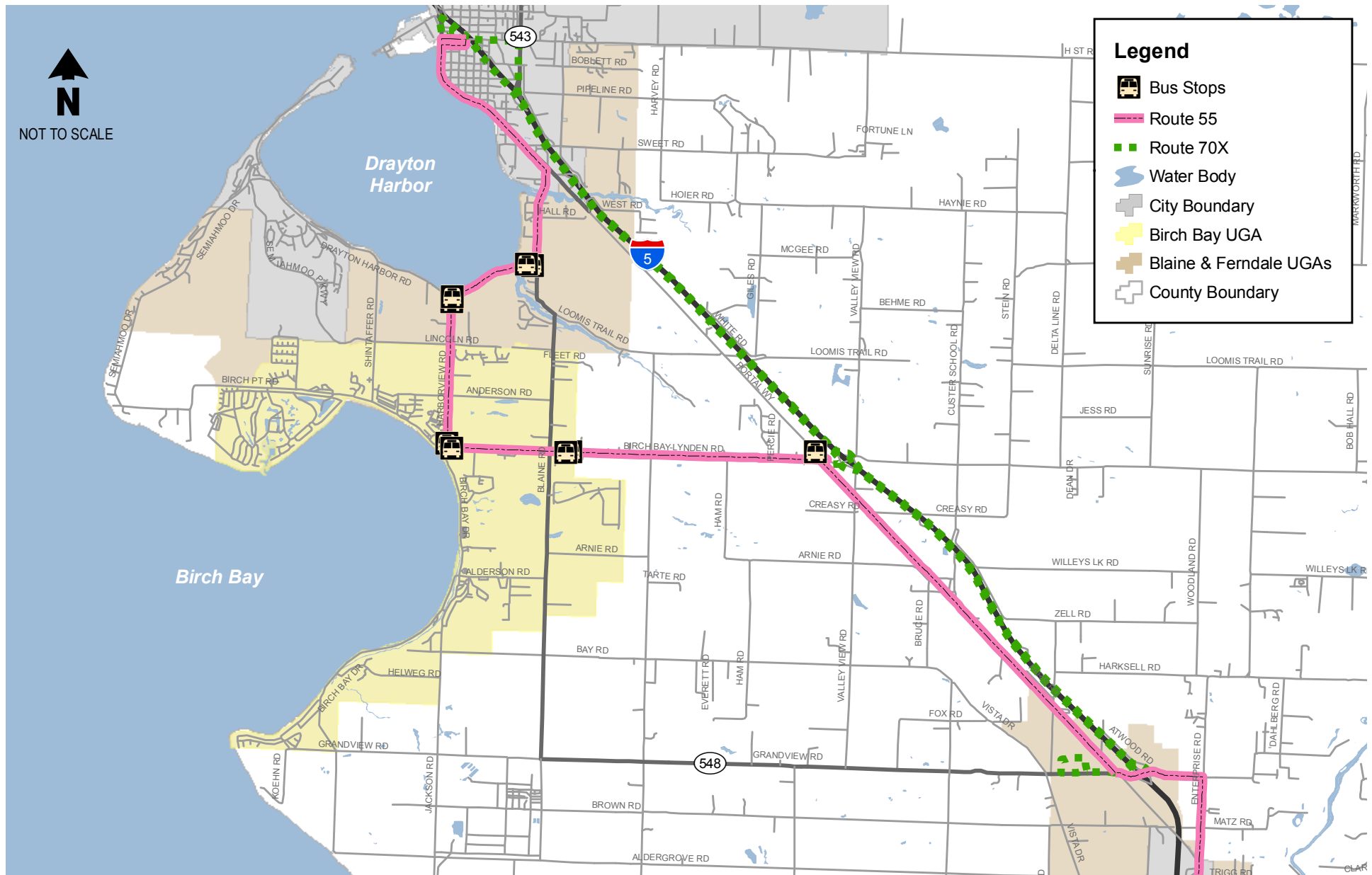
1. 2007 (March to June) WTA average monthly ridership

### Dial-a-Ride Service

WTA's Dial-a-Ride service is provided for users in the Birch Bay and Blaine areas. This service provides local service in the area, and also connects to Route 70X. According to the WTA Six-Year Strategic Service Plan, Dial-a-Ride service during the middle of the day will serve as Route 55, a local service route. When Route 70X is in the area, the Dial-a-Ride service will continue to provide connections to the fixed route service. The average monthly ridership in 2006 for the Dial-a-Ride service was 606 passengers.

### Paratransit Service

WTA's paratransit service is provided for those users who are not able to use the traditional fixed route services. These users are typically people with disabilities or seniors. The federal Americans with Disabilities Act (ADA) provides standards for paratransit, which includes a policy that passenger capacity constraints are not allowed. WTA strives to meet the demand of all eligible individuals.



**Figure 6**  
Fixed Transit Routes

*Birch Bay Transportation Planning Study*

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## Rideshare Service

WTA's Rideshare program is intended for those users who are not served well by the fixed route service, or desire a more flexible commuting option. There are area employers in the general study area that must comply with the State's Commute Trip Reduction (CTR) program. WTA assists by providing employer outreach programs.

## Non-motorized Facilities

Birch Bay's existing transportation system includes relatively limited facilities for pedestrians and bicyclists. In the areas where sidewalks or bicycle lanes are not available, pedestrians must use the roadway shoulders and bicyclists use the shoulders or ride in the main travel lanes. Figure 7 illustrates where paved and unpaved shoulders exist on all classes of streets within the Birch Bay Urban Growth Area (UGA).

According to Whatcom County road standards, newly constructed rural arterials and major collectors should have eight foot shoulders and a drainage ditch. Neighborhood collectors should have 6 foot shoulders and a drainage ditch. Local roads should have a four foot gravel shoulder and drainage ditch.

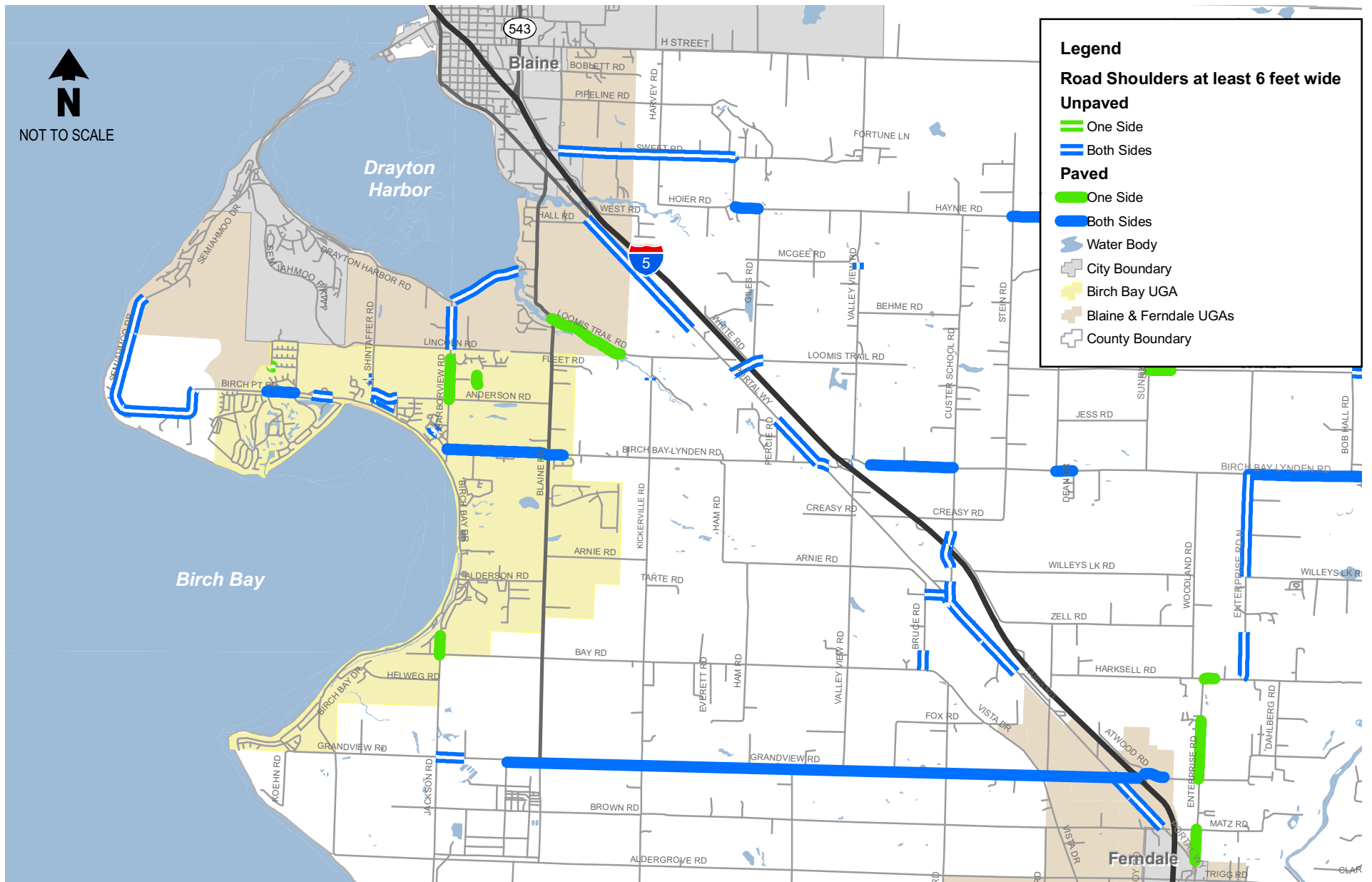
**Table 6. Whatcom County Road Standards for Shoulder Width**

Arterial Classification	Shoulder Width <sup>1</sup>
Rural Principal and Minor Arterials	8
Rural Major Collectors	8
Rural Minor Collectors	6
Neighborhood Collectors	6
Local Streets	4

1. Measured in feet.

Source: Whatcom County Road Standards (2004)

The most significant roadway that has substantial shoulders is Grandview Road (SR 548) between Blaine Road and I-5. This state highway has paved shoulders that are at least six feet wide on both sides of the street. Another major east-west roadway with paved shoulders is Birch Bay-Lynden Road between Harborview Road and Blaine Road (SR 548). Few north-south roadways include shoulders that are at least six feet wide. One that does is on Harborview Road between Anderson Road and Drayton Harbor Road. A large portion of Semiahmoo Drive also has six foot wide unpaved shoulders.



**Figure 7**  
Available Roadway Shoulders

*Birch Bay Transportation Planning Study*



# Travel Forecasts & Alternatives Evaluation

## Travel Demand Forecasting Model

A travel demand forecasting model was used to assist in defining future transportation needs. The Whatcom Council of Governments (WCOG) travel demand forecasting model was used as a basis for developing the Birch Bay area travel demand forecasting model. The WCOG model is hosted on an EMME/2 software platform and is calibrated to a 2005 base year. The model forecasts weekday PM peak hour traffic volumes based on the 2027 land use forecasts.

The WCOG travel demand forecasting model divides the Whatcom County into Transportation Analysis Zones (TAZs) which are relatively similar areas in terms of land use and travel characteristics. The TAZs contain the land use data from which the traffic using the transportation system is generated. The land use data is summarized for the Birch Bay area in Appendix B. The original WCOG model represented the Birch Bay area by 30 TAZs. These TAZs were further refined as part of this study into 116 TAZs to provide more detail in evaluating travel demands along specific corridors and intersections. The zones external to Birch Bay area were not changed.

The transportation network represents the local area road system within the model. The WCOG model, being a strategic planning model, includes all arterial and collector streets in addition to the state highways. In the Birch Bay area, collector roads and some local streets were included to more accurately represent travel patterns. Each roadway is divided into segments based on the location of key intersections and major driveways. Road segments are coded by functional classification, number of lanes, speed, and capacity.

Trip tables represent the travel among the traffic analysis zones and are estimated from the land uses. Trip generation equations are used to convert land use into travel demand. Trips are generated for different purposes including work, college, school, recreation, shopping, and others. Trip distribution is the other basic tool for developing trip tables. Trips are distributed using a gravity model that allocates zone-to-zone interchanges based on travel time and distances.

The model assignment results were compared to actual traffic counts and travel patterns to calibrate and validate the model to base year conditions. The calibration/validation process involves refining and reviewing the model to better represent existing conditions. The Birch Bay area model was calibrated for the PM peak hour (using recent counts) within generally accepted standards for transportation models and thus provides a basis for developing and evaluating future travel demands.

## Existing and Forecast Land Use

Land use and socioeconomic data were used to develop traffic forecasts for the study area. The WCOG model provided the basis for developing the base year (2005) and forecast year (2027) land use. The land use data and forecasting methodology are documented in Appendix C. Table 7 summarizes the 2005 and 2027 total number of dwelling units and employees for the Birch Bay UGA and City of Blaine with UGA.

**Table 7. Existing and Forecast Land Use**

Land Use Type and Area	2005	2027	Percent Increase
<b><u>Households<sup>1</sup></u></b>			
Birch Bay UGA	4,087	7,629	87%
City of Blaine with UGA	1,900	6,089	220%
<b>Total</b>	<b>5,987</b>	<b>13,718</b>	<b>129%</b>
<b><u>Employment<sup>2</sup></u></b>			
Birch Bay UGA	593	1,100	86%
City of Blaine with UGA	2,876	4,888	70%
<b>Total</b>	<b>3,470</b>	<b>5,988</b>	<b>73%</b>

Source: Transpo Group 2007

1. Households measured in number of dwelling units.

2. Employment measured in number of employees.

Within the study area, the number of households is forecast to grow by approximately 7,700 dwelling units, an almost 130 percent increase from 2005 to 2027. The largest numbers of new dwelling units are expected to be built in the City of Blaine and its UGA. Approximately 4,200 new dwelling units are estimated to be constructed by 2027.

Existing and forecast employment within the study area are also summarized in Table 8. The total number of employees for the study area is forecasted to increase by 73 percent, from 3,470 to 5,988 employees. Most of the employment growth will occur in the City of Blaine and its UGA, approximately 2,000 new employees. The employment in the Birch Bay area is forecast to nearly double by 2027, an increase of over 500 new employees.

## Baseline Transportation Improvements and Analysis

City, County, and state transportation improvements projects likely to be funded and built by 2027 were reviewed and included as appropriate in the future baseline model. The improvements were defined based on the City of Blaine and Whatcom County Transportation Improvement Program (TIP) and the WSDOT Highway Systems Plan. In the Birch Bay area the planned improvements included the Lincoln Road extension and widening between Shintaffer Road and Blaine Road (SR 548). A new connector road between Birch Point Road and Lincoln Road at Shintaffer Road also was assumed completed by 2027. Table 8 provides a description of the major baseline transportation improvements included in the model.

**Table 8. 2027 Baseline Transportation Improvements**

Roadway	Project Limits	Project Description
Lincoln Road	Shintaffer Road and Blaine Road (SR 548)	Widen between Shintaffer Road and Morningside Drive and construct the extension from Morningside Drive to Blaine Road (SR 548)
Birch Point Connector	Birch Point Road and Lincoln Road	Construct a road connection between Birch Point Road and Lincoln Road at Shintaffer Road

Traffic volume growth in the Birch Bay area between 2005 and 2027 was approximately 90 percent in the PM peak hour causing relatively high growth percentages along the study area corridors. Figure 8 illustrates the growth in traffic volumes between 2005 and 2027.

The increase in traffic volumes during the PM peak hour is a direct result of the increase in residential land uses particularly along Semiahmoo Drive thus causing more home-based-work trips which occur during the peak periods.

This large percent increase in traffic volumes is still well below the capacity for most of the roadways within the study area. Traffic volumes exceeded capacities along Birch Bay-Lynden Road and Grandview Road (SR 548). The large increase in traffic volumes (approximately 60 percent) is expected to degrade the traffic operations of I-5/Birch Bay-Lynden Road and the I-5/Grandview Road (SR 548) interchanges below county and regional level of service standards. Volumes exceeding capacity are also observed along Blaine Road (SR 548) and Drayton Harbor Road. These result from traffic shifting from the I-5/Birch Bay-Lynden Road interchange and the I-5/Grandview Road (SR 548) interchange to I-5/south Blaine interchange (exit 274). Much of this traffic is generated by the planned households along Semiahmoo Drive and within the Blaine UGA.

The analysis of the baseline scenario indicated that the most critical areas for congestion in the future would be along Birch Bay-Lynden Road between I-5 interchange and Harborview Road and along Grandview Road (SR 548) between the I-5 interchange and Vista Drive. It was found that improving traffic operations at these locations consequently reduces the traffic using the I-5/south Blaine interchange (exit 274), thus resolving capacity issues along Blaine Road (SR 548) and Drayton Harbor Road observed under the baseline scenario.

## Alternatives Analysis

The evaluation of the baseline travel forecasts indicated a need for additional east-west capacity and circulation options within the Birch Bay area. Options to address these issues ranged from adding more capacity to Birch Bay-Lynden Road and Grandview Road to extending Lincoln Road. These alternative roadway improvements were evaluated using the County's travel demand model. Separate model scenarios were created for each alternative to evaluate the shifts in traffic due to the proposed roadway improvement project or group of projects. The alternative analysis used the 2027 baseline model as a starting point. The alternatives analysis included an evaluation of the scenarios listed in Table 9.

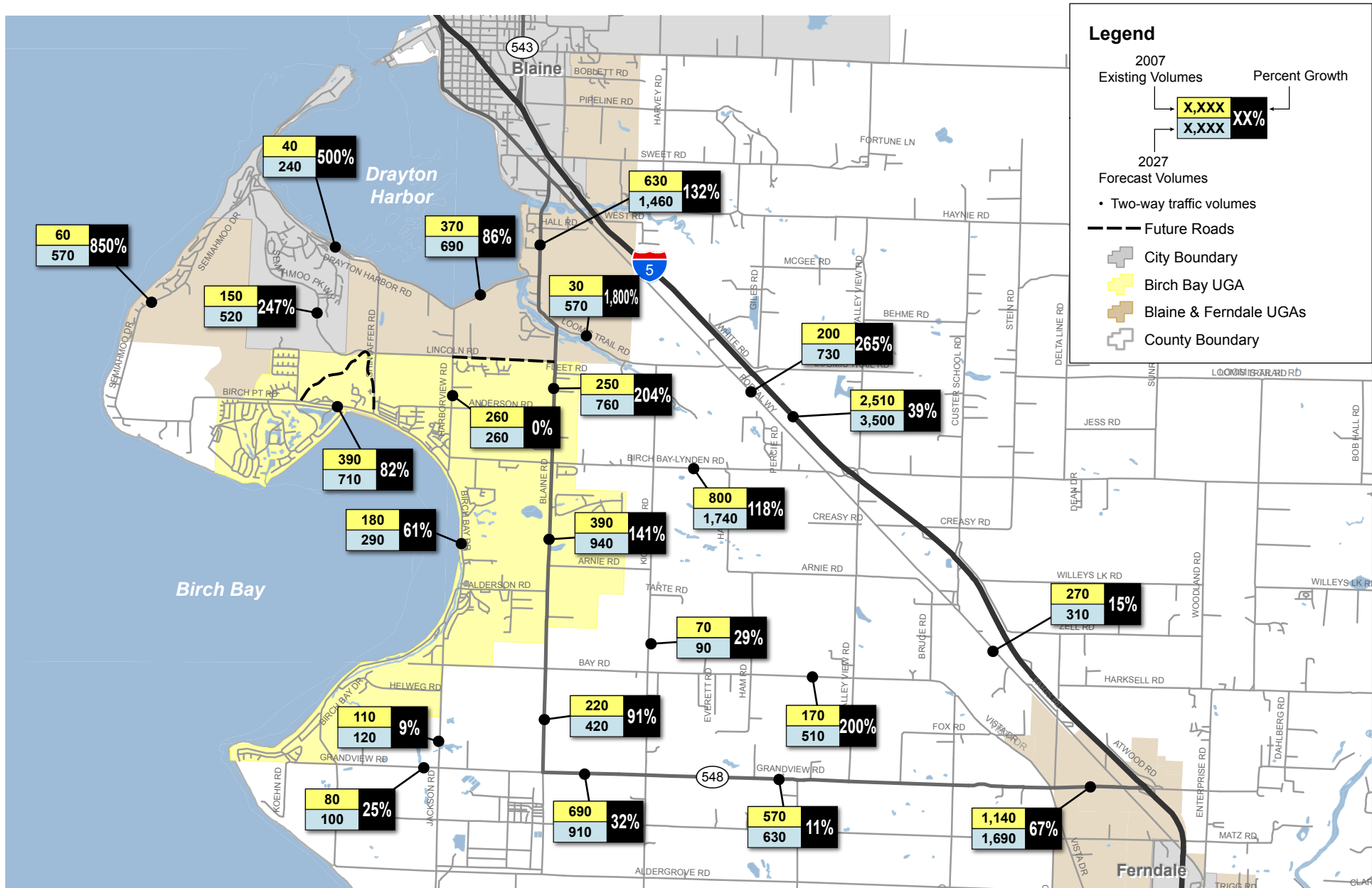
**Table 9. 2027 Model Scenarios Evaluated**

Scenario	Scenario Description
Birch Bay-Lynden Road Improvement Scenarios	<ul style="list-style-type: none"> <li>• Add turn lanes at the intersections with the I-5 ramps.</li> <li>• Widen Birch Bay to five lanes between Harborview Road and Portal Way.</li> </ul>
Grandview Road (SR 548) Improvement Scenarios	<ul style="list-style-type: none"> <li>• Add turn lanes at the intersections with the I-5 ramps.</li> <li>• Widen Grandview Road (SR 548) to five lanes between Vista Drive and I-5.</li> </ul>

Alternatives analysis was performed with capacity improvements assumed at the Birch Bay-Lynden Road and Grandview Road (SR 548). These improvements assume the addition of turn lanes at the I-5 interchange intersections with Birch Bay-Lynden Road and Grandview Road (SR 548). Capacity improvements were also evaluated along Birch Bay-Lynden Road between Portal Way and I-5 and for Grandview Road (SR 548) between Vista Drive and I-5. In addition, a two-way left turn (TWLT) lane was evaluated along Birch Bay-Lynden Road between Portal Way and Harborview Road. The purpose of the TWLT lane is to alleviate friction issues between through traffic and local traffic. Traffic volumes for the baseline scenario are illustrated in Figure 8.

The alternatives analyses illustrate the need for increased capacities along Birch Bay-Lynden Road and Grandview Road (SR 548) west of I-5. These corridors need to be widened to accommodate the traffic generated by the new residential developments during the peak periods. The transportation system recommendations are illustrated in more detail in the following section.





**Figure 8**  
2007 and 2027 PM Peak Hour Traffic Volumes  
Birch Bay Transportation Planning Study

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# Transportation System Improvement Recommendations

The transportation system improvement recommendations provide a long-range strategy for the Birch Bay UGA to address current and forecast transportation issues and needs.

Transportation system improvements are required to accommodate the projected growth in population and employment within the Birch Bay UGA. The transportation system improvement recommendations are based upon analyses of the existing transportation system, forecasts of future travel demands, anticipated availability of funding resources, and the desire of the Birch Bay community to create an efficient transportation system that puts a priority on community livability. The Study builds on the countywide policies and standards, while shaping transportation goals and vision for the Birch Bay area.

The transportation systems plan primarily focuses on streets and highway improvements because they serve most of the travel needs for the area. The streets and highways serve general traffic, freight, transit, ridesharing, pedestrians, and bicyclists. Therefore, the Study also provides the framework for other travel modes in the community, including pedestrian, bicycle, and transit modes.

## Streets and Highways

Streets and highways serving Birch Bay provide the basic transportation system for the Birch Bay UGA and surrounding areas. They also serve other travel modes including pedestrians, bicycles, and transit. The street and highway section identifies the functional roadway system and improvement projects and programs needed to maintain and expand the transportation system.

### Roadway Functional Classification

Roadway functional classification provides a hierarchy of roadways. These classifications provide a guide for future development of the Birch Bay area's roadway system. Arterial roadways serve higher traffic volumes and may have limited access points while local roadways provide neighborhood circulation and local access. Collectors are a classification between arterial and local access roads, typically connecting residential neighborhoods with community centers and facilities.

Functional classifications for roadways in Whatcom County are based on the Federal Function Classification map, which was last updated in 2004. Because Birch Bay is not considered an urban area based on federal criteria, the arterials and collectors in the area are designated as rural rather than urban on the federal map. However, for purposes of determining appropriate road design standards, Whatcom County Public Works applies urban standards to collectors and arterials within the Birch Bay Urban Growth areas. This acknowledges and supports the need for urban-level improvements (curb, gutter, and sidewalk) within an area designated for urban densities.

In addition to the rural-urban designations, further changes in the functional classification of some roadways are needed to support future demand for local circulation and regional access to the Birch Bay area as the area transitions from rural to urban designations and densities.

## Transportation Improvement Projects

Based on an evaluation of existing and forecast traffic volumes, traffic operations, safety, and circulation needs, a recommended list of transportation improvement projects and programs were defined. The project list is organized into the following categories:

- Intersection Projects
- New Roadway and Major Widening or Reconstruction Projects
- Minor Widening and Reconstruction Projects
- State Route Projects
- Other Mode

Figure 9 and Table 10 identify each of the projects and their locations. Table 10 also provides a brief description of each project including the project limits. The table identifies projects that are currently part of the County's Transportation Improvement Program (TIP). This highlights the projects that are currently identified for planning, design, or construction. A project identification number is provided for each project that is referenced in Figure 9.

Planning level cost estimates are also included for each project. The cost estimates were prepared based on typical per unit costs, functional classification, and level of improvement. The cost estimates include allowances for right-of-way acquisition based on generalized needs to meet the County's adopted roadway standards. Estimated costs for several improvements on state routes were developed jointly with Washington State Department of Transportation (WSDOT).

A relative priority (high, medium, and low) was established for each project. The priority reflects the relative need for the projects to enhance the Birch Bay area transportation system and provides guidance in implementing the respective improvements.

### *State Route Projects*

I-5 provides the primary regional connection to the Birch Bay area. To the north, I-5 connects the Birch Bay area to the U.S./Canada border. To the south, I-5 connects to Bellingham and the central Puget Sound region. SR 548 also provides for regional travel from the Birch Bay area to I-5 from the north and east. The Washington State Highways Systems Plan (HSP) is the element of Washington's Transportation Plan that addresses the state highway system. The 2007-2026 HSP does not identify specific improvements within the study area. The HSP calls for an Interstate Master Plan that would identify improvements to optimize capacity and safety on the interstate highway system.

**I-5 Interchanges** – The Study identifies improvements to two interchanges serving the Birch Bay area. Improvements are needed to fix existing operational issues in the near term and to serve anticipated growth in the long term.

**Table 10. Birch Bay Transportation Planning Study Projects and Programs**

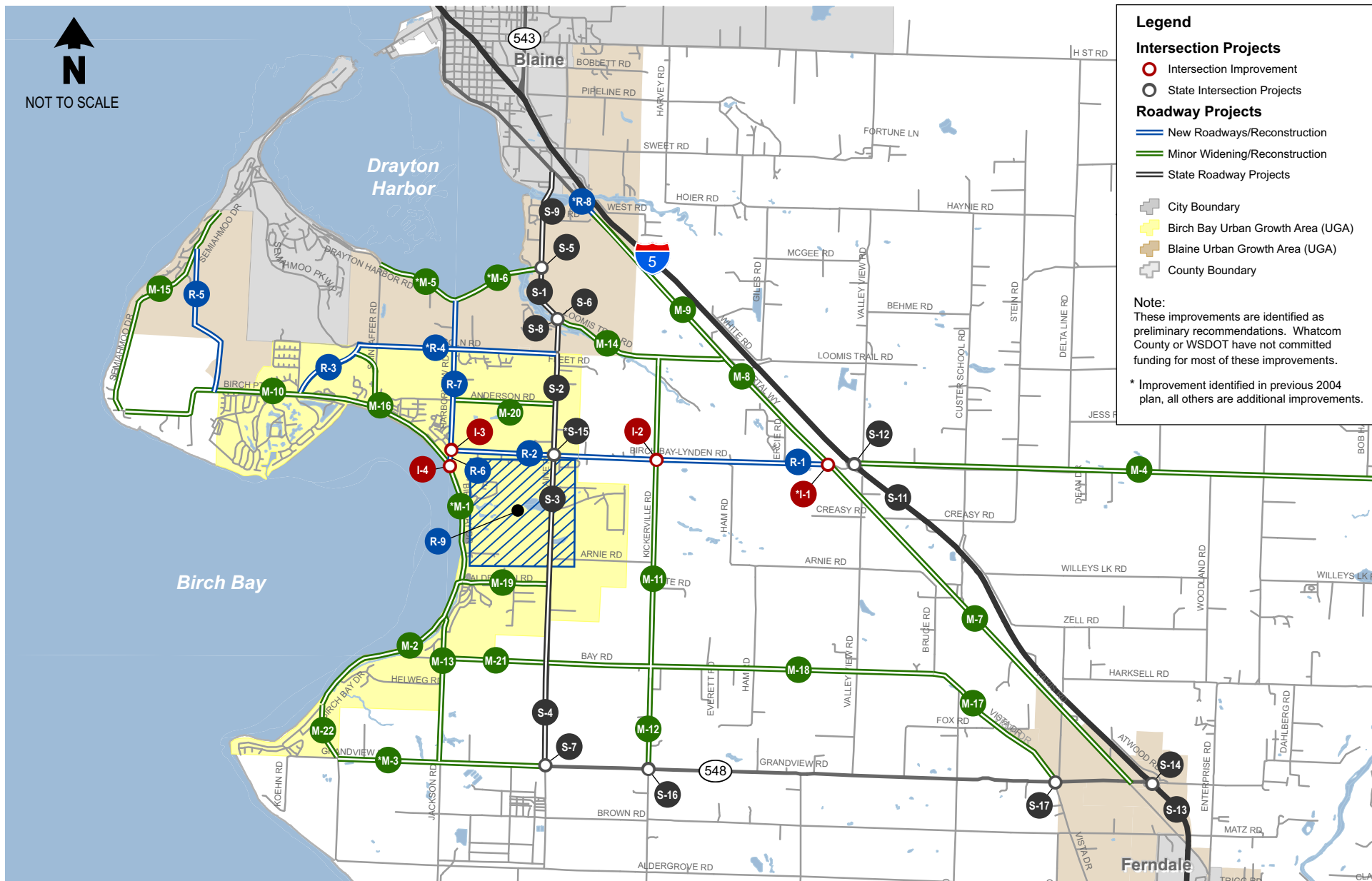
Project Group	Project ID	Project Name	Project Limits	Project Description	In Existing TIP? <sup>(1)</sup>	TIF Eligible?	Total Project Cost (\$1,000s) Estimated <sup>(2)</sup>	Relative Priority	Project Justification				Comments
									Capacity	Safety	Road Standards & Preservation	Area Circulation	
INTERSECTIONS PROJECTS	I-1	Birch Bay- Lynden Road / Portal Way	Intersection	Construct intersection improvements to include turn lanes and install traffic signal when warranted.	Yes	Yes	\$3,000	High	X	X			In design, construction programmed for 2009.
	I-2	Birch Bay-Lynden Road / Kickerville Road	Intersection	Construct intersection improvements to include roundabout or install turn lanes and traffic signal, when warranted.	No	Yes	\$3,000	Medium	X	X			Turn lanes could be constructed on Birch Bay-Lynden Road as part of R-1.
	I-3	Birch Bay-Lynden Road / Harborview Road	Intersection	Construct intersection improvements to include turn lanes and install traffic signal when warranted.	No	Yes	\$3,000	High	X	X			
	I-4	Birch Bay Drive / Harborview Road	Intersection	Improve/ redesign the intersection with turn lanes, and install traffic signal when warranted.	No	Yes	\$3,000	High	X	X			
NEW ROADWAYS AND MAJOR WIDENING OR RECONSTRUCTION PROJECTS	R-1	Birch Bay-Lynden Road Widening	Portal Way to UGA limit just east of Blaine Road	Widen to rural major collector standards including turn lanes at major access locations and paved shoulders for non-motorized trips.	No	Yes	\$1,500	High	X	X	X		Also see project I-2.
	R-2	Birch Bay-Lynden Road Widening	UGA limit just east of Blaine Road to Harborview	Widen to urban principal arterial standards including turn lanes and non-motorized facilities.	No	Yes	\$1,800	High	X	X	X		Also see projects I-3 and I-4.
	R-3	Birch Point Connector Road	Birch Point Road to Shintaffer Road	Construct new 2-lane connection at urban standards including non-motorized facilities and new intersection with Semiahmoo Drive.	No	No	\$2,000	High	X			X	A section of the project is constructed by the developer.
	R-4	Lincoln Road Extension and Improvement	Shintaffer Road to Blaine Road (SR 548)	Reconstruct existing road and construct 2-lane urban arterial to Blaine Road with non-motorized enhancement including construction of roundabouts at intersections with Blaine Road and Harborview Road.	Yes	Yes	\$9,000	High	X			X	In design, construction programmed for 2011.
	R-5	West Blaine UGA Connector Road	Birch Point Road to Semiahmoo Drive	Construct new 2-lane road to urban standards between Birch Point Road and Semiahmoo Drive to serve future urban development.	No	No	\$4,800	Low				X	Blaine UGA. Would be constructed by development projects. Alignment would be defined as part of future development projects.
	R-6	Harborview Road	Birch Bay Drive to Birch Bay-Lynden Road	Improve roadway to urban principal arterial standards including non-motorized facilities.	No	Yes	\$200	High		X	X		
	R-7	Harborview Road	Birch Bay-Lynden Road to Drayton Harbor Road	Improve roadway to major collector standards including non-motorized facilities.	No	Yes	\$1,000	Low			X		
	R-8	Portal Way/Dakota Creek Bridge #500	Bridge	Bridge replacement or rehabilitate structure	Yes	Yes	\$5,000	Medium		X	X		
	R-9	Commercial area circulation roads	West of Blaine Road (SR 548).	Local circulation urban road(s) as part of future development.	No	No	\$6,000	Medium	X			X	To be built by development projects with potential future Birch Bay Town Center.

Project Group	Project ID	Project Name	Project Limits	Project Description	In Existing TIP? <sup>(1)</sup>	TIF Eligible?	Total Project Cost (\$1,000s) Estimated <sup>(2)</sup>	Relative Priority	Project Justification				Comments
									Capacity	Safety	Road Standards & Preservation	Area Circulation	
MINOR WIDENING AND RECONSTRUCTION PROJECTS	M-1	Birch Bay Drive	Alderson Road to Shintaffer Road	Improve roadway to urban minor arterial standards including non-motorized facilities.	Yes	Yes	\$5,000	High		X (urban)	X		
	M-2	Birch Bay Drive	Alderson Road to Point Whitehorn Road	Improve to urban minor arterial standards including non-motorized facilities.	No	Yes	\$1,800	Medium		X (urban)	X		
	M-3	Grandview Road	Point Whitehorn Road to Blaine Road	Improve to rural collector road standards with paved shoulders for non-motorized travel.	Yes	No	\$3,000	Low			X		
	M-4	Birch Bay-Lynden Road	I-5 to Guide Meridian Road	Improve to rural major collector standards including paved shoulders for non-motorized travel.	No	No	\$5,000	Medium			X		Supports Birch Bay Subarea Transportation Plan with non-motorized connection to/from Lynden.
	M-5	Drayton Harbor Road	Harborview Road to Shintaffer Road	Reconstruct, repair road slope and pavement and upgrade roadway.	Yes	No	\$1,800	Medium			X		Within Blaine Urban Growth Area. Environmental constraints will affect design standard.
	M-6	Drayton Harbor Road	Harborview Road to Blaine Road	Improve to rural collector standards with shoulders for non-motorized travel.	Yes	Yes	\$1,800	Medium		X (urban)			Within Blaine Urban Growth Area.
	M-7	Portal Way	Grandview Road to Birch Bay- Lynden Road	Reconstruct to major collector standards including paved shoulders for non-motorized travel.	No	No	\$3,000	Low			X		If pavement is low than Whatcom County usually has a major reconstruction.
	M-8	Portal Way	Birch Bay- Lynden Road to Loomis Trail Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	Yes	\$1,200	Medium	X				
	M-9	Portal Way	Loomis Trail Road to Blaine city limit	Reconstruct to major collector standards including paved shoulders for non-motorized travel.	No	No	\$1,800	Low			X		
	M-10	Birch Point Road	Semiahmoo Drive to Shintaffer Road	Reconstruct to urban minor arterial standards including non-motorized facilities	No	Yes	\$3,000	Low		X (urban)	X		
	M-11	Kickerville Road	Loomis Trail Road to Bay Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	No	\$2,400	Low			X		
	M-12	Kickerville Road	Bay Road to Grandview Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	No	\$650	Low			X		
	M-13	Jackson Road	Birch Bay Drive to Grandview Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	Yes	\$1,200	Low			X		
	M-14	Loomis Trail Road	Blaine Road to Portal Way	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	Yes	\$1,200	High	X		X		
	M-15	Semiahmoo Drive	Blaine city limits to Birch Point Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	Yes	\$2,000	Low			X		Within Blaine Urban Growth Area.
	M-16	Shintaffer Road	Lincoln Road to Birch Point Road	Reconstruct to urban collector standards including paved shoulders for non-motorized travel.	No	Yes	\$600	Low			X		
	M-17	Vista Drive	Bay Road to Grandview Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	Yes	\$1,500	Medium	X		X		
	M-18	Bay Road	Blaine Road to Vista Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	No	Yes	\$2,600	Medium	X		X		
	M-19	Alderson Road	Birch Bay Drive to Blaine Road	Reconstruct to urban collector standards including paved shoulders for non-motorized travel.	No	Yes	\$600	Medium		X (urban)	X		
	M-20	Anderson Road	Harborview Road to Blaine Road	Reconstruct to urban collector standards including paved shoulders for non-motorized travel.	No	No	\$750	Low		X (urban)			
	M-21	Bay Road	Jackson Road to Blaine Road	Reconstruct to urban collector standards including paved shoulders for non-motorized travel.	No	No	\$750	Low		X (urban)			
	M-22	Point Whitehorn Road	Birch Bay Drive to Grandview Road	Reconstruct to urban collector standards including paved shoulders for non-motorized travel.	No	No	\$400	Low		X (urban)			

Project Group	Project ID	Project Name	Project Limits	Project Description	In Existing TIP? <sup>(1)</sup>	TIF Eligible?	Total Project Cost (\$1,000s) Estimated <sup>(2)</sup>	Relative Priority	Project Justification				Comments
									Capacity	Safety	Road Standards & Preservation	Area Circulation	
STATE ROUTE PROJECTS	S-1	Blaine Road (SR 548)	Peace Portal Drive to Lincoln Road	Reconstruct and widen to add turn lanes and shoulders/non-motorized facilities at standards (WSDOT standards).	No	No	\$6,000	High	X	X (urban)	X		Within Blaine Urban Growth Area.
	S-2	Blaine Road (SR 548)	Lincoln Road to Birch Bay-Lynden Road	Reconstruct and widen to add turn lanes and shoulders/non-motorized facilities at standards (WSDOT standards).	No	No	\$5,000	High	X	X (urban)	X		Continuation of Project S-1.
	S-3	Blaine Road (SR 548)	Birch Bay-Lynden Road to Bay Road	Reconstruct and widen to add turn lanes and non-motorized facilities to meet standards (WSDOT standards).	No	No	\$7,000	Medium	X	X (urban)	X		Continuation of Project S-2.
	S-4	Blaine Road (SR 548)	Bay Road to Grandview Road	Reconstruct to standards (WSDOT standards)	No	No	\$4,000	Medium		X	X		Continuation of Project S-3. Culvert completed for \$2.5M.
	S-5	Blaine Road (SR 548) / Drayton Harbor Road	Intersection	Improve/redesign the intersection with turn lanes and install traffic signal when warranted.	No	No	\$2,000	High	X	X			Within Blaine Urban Growth Area. Overlay project programmed by WSDOT.
	S-6	Blaine Road (SR 548) / Loomis Trail Road	Intersection	Improve/redesign the intersection with turn lanes and install traffic signal when warranted.	No	No	\$2,000	Medium	X	X			
	S-7	Blaine Road (SR 548) / Grandview Road	Intersection	Improve/ redesign the intersection , and install traffic signal with turn lanes when warranted or a roundabout facility	No	No	\$2,000	High	X	X			Developer funded.
	S-8	Blaine Road (SR 548) / California Creek Bridge Replacement	Bridge	Bridge replacement or rehabilitate structure	No	No	\$6,500	Medium			X		Within Blaine Urban Growth Area.
	S-9	Blaine Road (SR 548) / Dakota Creek Bridge Replacement	Bridge	Bridge replacement or rehabilitate structure	No	No	\$13,000	Medium			X		Within City of Blaine (fully WSDOT funded).
	S-11	On and Off ramps of I-5 / Birch Bay-Lynden Road Interchange	Interchange ramps	Improve/ redesign the ramps intersection with turn lanes and install traffic signal when warranted	No	No	\$3,400	High	X	X			
	S-12	I-5 / Birch Bay-Lynden Road Interchange	Interchange	Major reconstruction of interchange at Birch Bay-Lynden Road	No	No	N/A	Medium	X				
	S-13	I-5 / Grandview Rd Interchange	Interchange ramps	Improve/ redesign the ramps intersection with turn lanes and install traffic signal, when warranted	No	No	\$3,500	Medium	X	X			
	S-14	I-5 / Grandview Road Interchange	Interchange	Reconstruction of interchange at Grandview Road	No	No	N/A	Medium	X				Potential long-term project to widen Grandview Road to add travel lanes to reduce queuing impacts.
	S-15	Birch Bay- Lynden Road / Blaine Road (SR 548)	Intersection	Construct intersection improvements to include roundabout or install turn lanes and traffic signal, when warranted.	Yes	No	\$3,000	High	X	X			Potential Whatcom County funding.
	S-16	Grandview Road (SR 548) / Kickerville Road	Intersection	Construct intersection improvements to include roundabout or install turn lanes and traffic signal, when warranted.	No	No	\$3,000	Medium	X	X			Potential Whatcom County funding.
	S-17	Grandview Road (SR 548) / Vista Drive	Intersection	Construct intersection improvements to include roundabout or install turn lanes and traffic signal, when warranted.	No	No	\$3,000	High	X	X			
OTHER MODE	O-1	Park & Ride Facility	Birch Bay Town Center vicinity	Construct new park & ride lot ( or 2 smaller lots) with defined parking stalls capacity to serve Birch Bay, Semiahmoo, and Blaine.	No	No	N/A	Medium	X			X	Whatcom Transit Authority lead. Carry out location and demand study prior to density becomes high. Could be along Harborview Birch Bay-Lynden corridor.
	O-2	Increase Transit Service	Countywide	Increase transit service between Birch Bay and Blaine, Ferndale, and Bellingham.	No	No	N/A	Medium	X			X	Whatcom Transit Authority lead.

**Notes:**

- (1) Project is identified in County's current Transportation Improvement Program or is funded as part of State's Transportation Plan  
(2) Represents planning level project cost estimates. Project costs will be refined during the project design phase.



**Figure 9**  
Birch Bay Study Area Transportation Improvement Projects

*Birch Bay Transportation Planning Study*

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The  
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Group



Improvements to the I-5/Birch Bay-Lynden Road interchange (projects S-11, S-12) are identified in the Study as high and medium priorities respectively. Improvements to this interchange have been identified to meet near and long term needs. Project S-11 will improve operations in the near term by redesigning the ramp intersections with turn lanes and installing a traffic signal, when future traffic volumes warrant. Project S-12 will provide a complete reconstruction of the interchange.

Improvements to the I-5/Grandview interchange (projects S-13, S-14) are also identified for the near and long term needs. Similar to project S-11, project S-13 is a high priority and is identified to improve operations at the ramp intersections by adding turn lanes and installing a traffic signal when future traffic volumes warrant. Project S-14 is a medium priority and will provide a complete interchange reconstruction to meet long-range forecast needs.

**Blaine Road (SR 548)** – Improvements are identified for Blaine Road both north and south of Birch Bay-Lynden Road. North of Birch Bay-Lynden Road, the Study calls for reconstructing Blaine Road, from I-5 to Birch Bay-Lynden Road (projects S-1, S-2). The improvement projects would add shoulders for non-motorized travel. Intersection improvements are identified at Drayton Harbor Road and Loomis Trail Road (projects S-5, S-6). These improvements include adding turn lanes and traffic signals or roundabouts when future traffic volumes warrant. The Study also identifies the replacement of two bridges in this corridor, the California Creek bridge and the Dakota Creek bridge (projects S-8, S-9).

South of Birch Bay-Lynden Road, the Study identifies reconstructing Blaine Road from Birch Bay-Lynden Road to Grandview Road (projects S-3, S-4). The section of Blaine Road north of Bay Road is within the Urban Growth Area for Birch Bay and as such would be reconstructed to WSDOT's standards, adding shoulders for non-motorized travel. South of Bay Road, Blaine Road should be constructed per WSDOT's rural collector standards. Intersections improvements at Birch Bay-Lynden Road and Grandview Road are also identified in the Study (projects S-15, S-7). A potential roundabout at the Blaine Road (SR 548)/Grandview Road (SR 548) intersection is currently being discussed by WSDOT as part of a developer funded improvement. Though the transportation planning study does not identify the intersection of Blaine Road and Alderson Road as falling below LOS standards within the study period, planned intensive land uses at the intersection may require intersection improvements as mitigation under SEPA at the time of development.

**Grandview Road (SR 548)** – Two intersection improvements, in addition to those identified at the I-5 interchange and at Blaine Road (SR 548), are identified in the Study. Improvements to the intersections of Grandview Road (SR 548) at Kickerville Road and at Vista Drive include the installation of turn lanes and roundabout or traffic signal when future traffic volumes warrant. The improvement at Vista Drive/Grandview Road (SR 548) is a high priority because it serves traffic to/from the Birch Bay UGA to I-5 via Bay Road.

However, the HSP does identify I-5 from Grandview Road to the City of Blaine as a "solution that requires further analysis" as the existing capacity will not be sufficient for future traffic volumes.

### *Intersection Projects*

Improvements to intersections along County maintained arterials serving the Birch Bay area are needed to resolve existing and future deficiencies, primarily along Birch Bay-Lynden Road. This roadway serves as the main east-west arterial, connecting the Birch Bay area to I-



5 and the rest of the region. Intersection improvements along this corridor will improve safety and operations by adding turn lanes at key locations and installing traffic signals or roundabouts when future traffic volumes warrant. The Study identifies three high priority intersection improvements at Birch Bay-Lynden Road at Portal Way, Birch Bay-Lynden Road at Harborview Road, and Birch Bay Drive at Harborview Road.

### *New Roadways and Major Widening or Reconstruction Projects*

Several new roadways and major widening projects are identified in the Study to address existing deficiencies and support future growth. This category of projects includes upgrading and major widening of roadways to County standards to provide turn lanes at major access locations. Improvements to non-motorized facilities, such as roadway shoulders, are also identified.

**Birch Bay-Lynden Road Widening** – Birch Bay-Lynden Road serves as the primary east-west arterial, connecting Birch Bay to I-5. In addition to the intersection improvements identified above, the Study calls for widening the roadway to meet rural major collector standards from Portal Way to the UGA boundary just east of Blaine Road (SR 548) and to urban principal arterial standards west to Harborview Road. These projects would improve facilities for non-motorized travel by paving roadway shoulders and/or adding sidewalks or separated pathways. In addition, the project would include widening to accommodate turn lanes at major access locations. This will allow safer and easier access for left turning vehicles along Birch Bay-Lynden Road.

**Lincoln Road Extension and Improvement** – To complete an alternative east-west corridor north of Birch-Bay Lynden Road, an extension of Lincoln Road between Harborview Road and Blaine Road (SR 548) is planned and funded for construction. In addition to extending the roadway, the project will improve Lincoln Road from Shintaffer Road to Blaine Road (SR 548) to urban minor arterial standards, including construction of two roundabouts at Harborview Road and Blaine Road. The project also includes a separated pathway for non-motorized travel.

**Birch Point Connector Road** – A new connection between Birch Bay Drive and Lincoln Road is also a key new collector route serving the northern part of the Birch Bay UGA. When fully constructed, this new roadway will provide improved mobility and an alternative to Birch Bay Drive for east-west traffic to/from the residential growth anticipated in the Birch Bay and Blaine UGAs. The project includes realigning the segment of Shintaffer Road south of Lincoln Road and constructing a new intersection at Lincoln Road. Part of the road is being funded and constructed by a developer. The remaining section will be a County project.

**Harborview Road** – Improvements are identified for Harborview Road from Birch Bay Drive to Drayton Harbor Road. The section of Harborview Road from Birch Bay Drive to Birch Bay-Lynden Road would be improved to reflect the existing and future demands of Birch Bay traffic traveling to I-5 via Birch Bay-Lynden Road. The section of Harborview Road from Birch Bay-Lynden Road to Drayton Harbor Road would be improved to urban collector standards. Both of these projects would include improve facilities for non-motorized travel.

### *Commercial Area Circulation Roads*

In addition to specific improvements identified above, the Study calls for construction of new circulation roads within the planned Birch Bay UGA commercial area between Birch Bay-Lynden Road and Alderson Road. These new roadways would provide improved access and circulations to future development anticipated for this area, as well as help maintain safety and operations of adjacent arterials, collectors, and state highways.

### *Minor Widening and Reconstruction Projects*

Improvements are also needed on other roadways serving the Birch Bay area. This category of projects includes minor widening of roadways to add shoulders and improve non-motorized facilities.

**Birch Bay Drive** – With its proximity to the waterfront, Birch Bay Drive serves as a primary non-motorized route within the Birch Bay UGA. The Birch Bay Drive Pedestrian Facility, part of the Birch Bay Shoreline Enhancement Project, is designed and identified in the County's six-year Transportation Improvement Program. This project would improve Birch Bay Drive roadway and provide separate facilities for pedestrians and bicyclists. The 2000 Birch Bay Economic Development Action Plan emphasized the need for improved pedestrian and bicycle facilities along Birch Bay Drive as part of the community's economic development strategy. A year round speed limit of 20 to 25 mph is recommended. Specific changes to speed limit should be considered with community input.

**Loomis Trail Road** – Loomis Trail Road serves as an east-west connector between Portal Way and Blaine Road, northeast of the Birch Bay UGA. The Study identifies improvements to reconstruct Loomis Trail Road to rural major collector standards. The project includes paved shoulders for non-motorized users.

### *Maintenance and Operations Programs*

A systematic program for maintaining the existing and future transportation infrastructure is critical to a safe and efficient transportation system. Elements of a maintenance and operations program for the Birch Bay area should include a systematic evaluation of pavement conditions on arterial and local roadways, signage, sight distance (such as vegetation blocking sight lines), and impacts of parking on safety and operations. Other elements should include regular monitoring and servicing of traffic control devices, such as traffic signals and flashing beacons.

In addition, the maintenance and operations program should include a periodic evaluation of speed limits on facilities based on functional classification, design, and current roadway conditions. The speed evaluation should consider elements such as geometric design, actual travel speeds, intersection control, traffic safety, and possible impacts on adjacent corridors or neighborhood streets.

## Public Transportation and Transportation Demand Management

Public transit and travel demand management (TDM) programs are important components in an integrated and comprehensive transportation system. These programs build on regional programs with refinements to reflect the specific needs of the Birch Bay area.

### Public Transit

The Study identifies two transit related improvements. A new park & ride lot is identified for a location serving Birch Bay, Semiahmoo, and the City of Blaine. No specific site is identified for the park & ride, however potential locations along the Harborview, Birch Bay-Lynden Road, or Grandview Road corridors should be evaluated. A study is recommended to evaluate future transit demand and a potential future park & ride lot location.

In addition, the Study identifies increased fixed route transit service between Birch Bay and the destinations of Blaine, Ferndale, and Bellingham as a future need.

### Transportation Demand Management Program

In addition to improving the transit system, reducing travel demand through transportation demand management (TDM) strategies can supplement other efforts in reducing peak hour congestion within the Birch Bay UGA. TDM programs consist of measures for reducing peak hour single occupancy vehicle travel that are primarily focused on larger employers. The Washington Commute Trip Reduction (CTR) Law (RCW 70.94.521) requires TDM performance targets for employers with over 100 employees. Currently there are no affected worksites within the Birch Bay area.

Whatcom County has a draft CTR plan that is scheduled for adoption in 2008. The study supports TDM strategies in the County's UGAs. These strategies focus on the integration of land use and transportation planning, as well as encouraging non-motorized travel.

## Pedestrian and Bicycle Systems

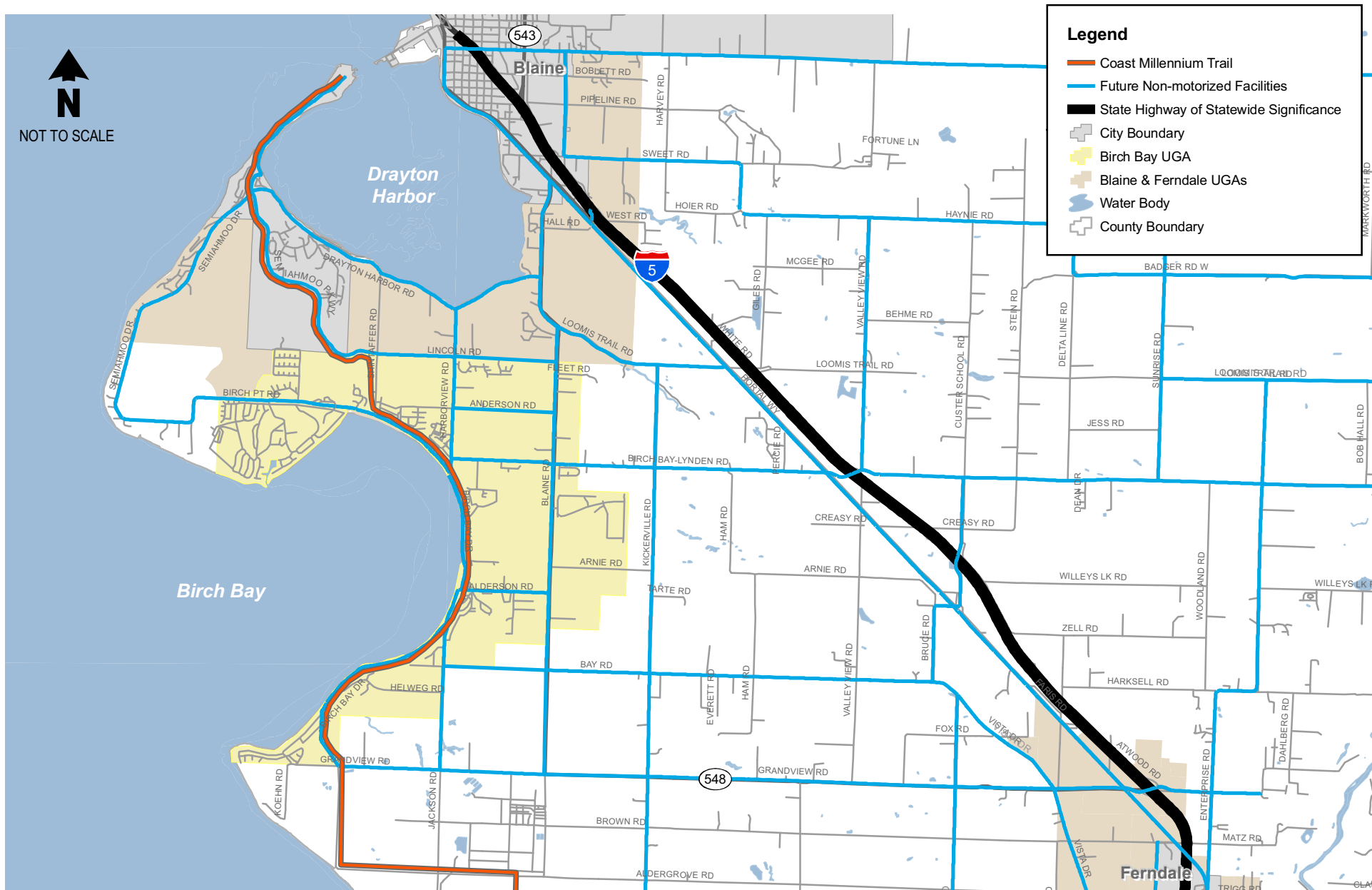
A well connected non-motorized transportation system encourages healthy recreational activities, reduces vehicle travel demand, and enhances safety within the community. The projects included in Table 10 included pedestrian and bicycle facilities as part of the identified roadway improvements. In many cases, the proposed improvements include the addition or enhancement of roadway shoulders to accommodate non-motorized transportation within the Birch Bay. Included in these projects is the Birch Bay Drive Pedestrian Facility project.

The pedestrian system within the Birch Bay area is comprised of sidewalks, walkways, trails, and roadway shoulders. Within the UGAs, the County desires to have roadways improved to urban standards, which could include sidewalks or other types of pedestrian walkway facilities. Pedestrian facilities should be located along streets that provide access and connectivity to the commercial businesses, residential areas, parks, schools, public buildings, and transit stops within the Birch Bay UGA. Enhanced roadway shoulders outside the UGA will improve safety for pedestrian travel in those areas.

Within the Birch Bay area, the bicycle system is comprised of mostly roadways. Many of the roadways within the study area have deficient roadway shoulders or are without shoulders altogether. The major improvements for bicycle travel will be the addition or enhancement of roadway shoulders. An important component of the bicycle system is completion of the Coast Millennium Trail through Birch Bay, providing a bicycling link from the Canadian border to Bellingham and farther south. A portion of the trail has been completed south of Semiahmoo Parkway.

There are several proposed non-motorized facilities throughout the County, a few of which are in the Birch Bay area. Proposed non-motorized facilities in the study area include:

- Bicycle lane along Semiahmoo Parkway
- Off-road trail that would connect to a bicycle lane along Birch Bay Drive
- Off-road trail to continue south of the Birch Bay Drive bicycle lane
- Bicycle lane along Birch Bay-Lynden Road
- Bicycle lane along Portal Way
- Portion of the Coast Millennium Trail that begins near Alderson Road and Birch Bay Drive and continues south toward Ferndale
- Bicycle lane along Birch Bay Drive



**Figure 10**  
**Birch Bay Study Area Non-motorized Transportation System Plan**

*Birch Bay Transportation Planning Study*



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## Project Cost Summary

Table 10 summarizes the list of improvement projects and programs. Planning level cost estimates are included for each project and program item. In addition to Whatcom County projects, the improvement program includes projects that are under the jurisdiction or lead of WSDOT. Table 11 provides a summary of the project cost estimates, by jurisdiction and improvement category.

**Table 11. 20-Year Project Cost Summary**

Improvement Category	Costs
<b><u>Capital Improvements</u></b>	
Birch Bay Area State Highway Improvements	\$63,400,000
Birch Bay Area County Arterial Improvements	\$85,350,000
<i>Subtotal</i>	<i>\$148,750,000</i>
<b>State Highway Improvement Cost per Year</b>	<b>\$3,170,000</b>
<b>County Arterial Improvement Cost per Year</b>	<b>\$4,267,500</b>
<b><u>County Programs</u></b>	
Maintenance and operations (Overlays) Cost per Year <sup>1</sup>	\$160,000
Maintenance and operations (Overlays) 20-Year Cost	\$3,200,000
<i>County Cost Subtotal</i>	<i>\$88,550,000</i>
<b>County Cost per Year</b>	<b>\$4,427,500</b>
<b>Total Project Cost</b>	<b>\$151,950,000</b>
<b>Total Project Costs per Year</b>	<b>\$7,597,500</b>

1. Based on Birch Bay Incorporation Feasibility Study, March 2008

Over \$150 million will be needed to fully fund the Birch Bay area's identified needs through 2027. Over 95 percent of the County related costs will be needed in the form of capital improvements to upgrade the County arterial system serving the Birch Bay area. The Study also identifies over \$3 million for maintenance and operations. An average of over \$7.5 million per year would be required to fully fund the Birch Bay area's transportation needs by 2027.

Approximately 43 percent of the \$148.75 million in capital transportation improvements is needed for improvements to state routes. Of the \$63.4 million in state route improvements, approximately \$7 million is needed for near term interchange improvements at I-5. The I-5 interchange improvements include signal and channelization improvements at the ramp intersections at Grandview Road and Birch Bay-Lynden Road. Long term needs at these locations call for the reconstruction of the interchanges themselves. The remaining \$56.5 million in state highway improvements would be on along SR 548 with a significant portion of the costs associated with the Dakota Creek bridge replacement project, estimated at \$13 million.

The highest cost for arterial improvements includes the Lincoln Road extension and improvement. This project accounts for over 10 percent of the non-state highway arterial improvements.

It is anticipated that existing funding sources will fall short of funding all of the improvement project needs identified in Table 10. Projects were prioritized to identify those projects that should be implemented first with the limited funding available. Table 12 summarizes the project costs by project type and relative priority.

The prioritization process considered the following:

- Project cost
- Project benefit
- Implementation complexity
- Project need

**Table 12. Project Relative Priority**

Project Type	High	Medium	Low	Total
Intersection	\$9,000,000	\$3,000,000	\$0	<b>\$12,000,000</b>
Major Road	\$14,500,000	\$11,000,000	\$5,800,000	<b>\$31,300,000</b>
Minor Road	\$6,200,000	\$16,300,000	\$19,550,000	<b>\$42,050,000</b>
State Route	\$24,400,000	\$39,000,000	\$0	<b>\$63,400,000</b>
<b>Total</b>	<b>\$54,100,000</b>	<b>\$69,300,000</b>	<b>\$25,350,000</b>	<b>\$148,750,000</b>

1. Table does not include projects for major reconstruction of I-5 interchanges at Birch Bay–Lynden Road and Grandview Road.

2. Table does not include transit service projects.

Of the projects categorized as high priority, approximately 45 percent are on state routes. This is consistent with the importance of state facilities to the Birch Bay area. Of the remaining high priorities, new roadways and major road widening/reconstruction projects make up the next largest share with approximately 27 percent of high priority projects. Intersection projects are the third largest share, approximately 17 percent, and minor widening/reconstruction projects are the smallest share of high priority projects at approximately 11 percent.

Although intersection projects are a relatively minor share of all high priority projects, they may provide the most value per dollar expended. Three of the four of intersection projects identified are categorized as a high priority.

# ATTACHMENT A

## PUBLIC PARTICIPATION SUMMARIES





# June 2007 – Birch Bay Subarea Plan Update Open House Summary

## Purpose and format

Whatcom County hosted an open house in Birch Bay at the Birch Bay Bible Community Church from 6:00 p.m. – 8:00 p.m. on June 12, 2007.

The purpose of the open house was to solicit comments from the public regarding their transportation concerns and potential improvement projects for the Birch Bay Urban Growth Area (UGA).



Attendees were able to learn about the results of a recent existing conditions analysis, areas where growth is anticipated, previously identified and anticipated transportation issues, and types of transportation improvements that may be proposed.

Display boards were placed at stations around the room to provide information to the attendees. Additionally, Whatcom County invited and provided a station for the Birch Bay Steering Committee. Attendees were asked to share their feedback, both written and verbal, on the information presented to them as well as suggest potential improvements to address specific issues.

A brief presentation was given at 6:45 pm to provide an overview of the purpose and need for the Birch Bay Subarea Plan update and the study objectives. The project team was available before and after the presentation to answer questions and talk with attendees about transportation issues in their community.

## Summary of comments

Seventy-nine (79) people attended the open house. Thirty-one (31) people filled out a comment form and twenty-eight (28) comments were left on the flip charts. The consultants and staff also recorded comments from attendees.

There were four main themes that were noted from the comments:

- A large number of comments suggested that Lincoln Road between Harborview Road and Blaine Road should be connected. Many of these comments also recommended extending Lincoln Road to Portal Way, via Loomis Trail Road; an

additional interchange with I-5 could be constructed to improve regional connections.

- Many comments expressed the need for additional access to I-5 from Birch Bay, including an overpass for vehicles to cross the railroad tracks without having to wait for the train to pass. Emergency vehicles also need direct access to and from I-5 without having to wait at the train crossing. Commenters explained that it is difficult for drivers and emergency vehicles to access I-5 from Birch Bay due to the limited number of access routes, narrow roads, congestion and delays at the railroad crossing.
- Another frequently submitted comment was that vehicles drive at high rates of speed along Birch Bay Drive and that the speed limit should be maintained at 20-25 mph year round. Other people suggested a number of other improvements along Birch Bay Drive. Their suggestions included constructing bike and pedestrian paths, widening shoulders, and building seawalls or berms for erosion control. A significant number of comments also suggested the need to widen a number of roads within Birch Bay.
- A significant number of the comments suggested the need for bike and pedestrian improvements in the area. Other comments focused on the need for additional public transportation.

An attendee provided the project team with two suggestions via written letters for transportation improvements:

- Ditch restoration is needed throughout the Birch Bay community. The community provided results from a successful ditch restoration project in Sonoma County, California. Community members believe that this improvement would slow down run-off, eliminate standing pools of water, prevent children from playing in the ditches, eliminate soil bank erosion, discourage use of the ditches as dumping grounds for debris, prevent vehicles from going into the ditches, and reduce ditch maintenance.
- Construct a causeway across Drayton Harbor connecting Cherry Street to Shintaffer Road. The community believes that this improvement would improve the economic prosperity of downtown Blaine, eliminate the railroad crossing that can currently block access for fire and EMT units, cost less than the Lincoln extension, is in conjunction with the Drayton Harbor Road improvement, can redirect commuter traffic off of Birch Point Road from Birch Bay Village, Bay Ridge, Birch Bay View, and Semiahmoo, and provide an economic boost during the Olympics for Birch Bay and Blaine due to enhanced accessibility from both North and South I-5.

## **Additional comments by location**

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Additional comments from the open house are summarized below. They are organized by the location that they refer to (*the number in parentheses indicates the frequency of the question or comment*).

### **General Comments**

- Display Board at public meeting illustrating six foot shoulders is incorrect. (2)
- Widen roads and shoulders. (2)
- City of Blaine, City of Ferndale, Birch Bay Steering Committee, and Whatcom County all need to work together rather than compete.
- Need to establish emergency evacuation route out of Birch Bay.
- The planners for the current construction between Birch Bay Village and I-5 have done a terrible job. Do not have this same agency in charge of future transportation improvements.
- The project team seems to be unaware that the Birch Bay community is a resort and retirement community primarily. And summer is the most populous time of year. Many of the year round residents are no longer employed.
- Infill prediction maps need to be modified to reconcile them with wetland maps.
- Plan for the future. Widen roads now that will need to be 4 lanes in 20-30 years.

### **Public and Non-Motorized Transportation**

- Increase public transportation in Birch Bay. (4)
- Improve all existing shoulders in Birch Bay for pedestrians and bikers. (4)
- Add bike and pedestrian paths in Birch Bay.
- Add bike and pedestrian paths on at least one north/south and east/west route in Birch Bay.
- Add sidewalks and a trail network in Birch Bay near the beaches and businesses.
- Cherry point refinery would like WTA to provide service to their location. If WTA cannot accommodate, they may look into private service provider.

### **I-5 Access**

- Additional I-5 access. Birch Bay-Lynden Road can't handle the current traffic volumes. (6)
- If additional access to I-5 from Birch Bay is constructed it needs to include an overpass at the railroad crossing that allow vehicles direct access to I-5. (5)
- Overpass at the railroad crossing that allows emergency vehicles to cross the railroad tracks without waiting for the train to pass. (4)
- Many of the residents in Birch Bay work at St. Joseph's Hospital in Bellingham and are on-call for emergency response. Birch Bay needs better access to I-5 in case of emergency. (3)
- Additional I-5 access, preferable at Loomis Trail. Birch Bay-Lynden Road can't handle the increase in traffic due to all the development taking place in the Birch Bay UGA.

- Complete the road that allows the Birch Bay Village access to I-5 without going on Birch Bay Drive.
- Finish construction on Birch Point Drive extension that will connect to Semiahmoo Parkway. This route is important to travel from Birch Bay Village to Cost Cutter in Blaine, and to access I-5.

### **Birch Bay Drive**

- The speed limit should be decreased to 20-25 mph year round on Birch Bay Drive due to vehicles moving at high speeds. (8)
- Birch Bay Drive to SR 548 is too narrow. (2)
- Don't initiate any transportation improvement projects along Birch Bay Drive, including trails and berms. It would only encourage people to use the private beaches. (2)
- Add bike and pedestrian paths along Birch Bay Drive. (2)
- Birch Bay Drive can not be closed down to one lane during construction. Existing roads must remain open during construction.
- Widen Birch Bay Drive to four lanes.
- Do not eliminate access to Birch Bay Drive.
- Birch Bay Drive needs transportation improvements.
- The speed limit on Birch Bay Drive should either be limited to 10 mph or it should be widened.
- Bike paths are needed on roads within Birch Bay and between Birch Bay and Blaine.
- Construct a seawall along Birch Bay Drive.
- Construct six foot shoulders along Birch Bay Drive.
- The presentation did not address current and future construction on Birch Bay Drive. Many of us are from Birch Bay Village and are very concerned about this and want more information.

### **Birch Bay-Lynden Road**

- Intersection of Birch Bay-Lynden Road and Portal Way is very congested. (3)
- Widen Birch Bay-Lynden Road between Harborview Road and I-5. (3)
- Intersection of Birch Bay-Lynden Road and Blaine Road is dangerous and congested.
- Birch Bay-Lynden Road is dangerous and congested.
- Intersection of Birch Bay-Lynden Road and Portal Way needs to have an overpass over the railroad crossing that allows provides direct access to I-5. Emergency vehicles need better access to/from Birch Bay.
- Delays at Portal Way and Birch Bay-Lynden Road due to railroad crossing. Whatcom County should work with BNSF to see if they can run their trains at off-peak traffic hours to accommodate commuters.
- Add a roundabout at the intersection of Harborview Road and Birch Bay-Lynden Road and at the intersection of Blaine Road and Birch Bay-Lynden Road.

- Transportation improvements at Peace Arch Outlet Stores will create congestion at the intersection of Portal Way and Birch Bay-Lynden Road. Additionally this intersection has a railroad crossing which also creates additional congestion.

### **Lincoln Road**

- Continuation of Lincoln Road between Harborview Road and Blaine Road. (10)
- Extend Lincoln Road to Portal Way and add additional access to I-5. (5)
- Lincoln Road needs wide shoulders. Currently there are no shoulders and this roadway is unsafe. (3)
- Add bike and pedestrian paths along Lincoln Road. (2)
- SR 548 between Lincoln and Birch Bay-Lynden Road.
- Widen Lincoln Road.

### **Drayton Harbor Road**

- Make improvements along Drayton Harbor Road in order to alleviate traffic volumes on Lincoln Road.
- Drayton Harbor Road needs to be improved.

### **Blaine Road**

- Widen Blaine Road. (2)
- The section of Blaine Road between Drayton Harbor Road and Peace Portal Drive is too narrow. (2)
- Blaine Road has high levels of congestion and no shoulders.

### **Portal Way**

- Roundabout at intersection of SR 548 and Portal Way.
- Congestion issues at the intersection of SR 548 and Portal Way. During the peak morning hours the queue backs up over one mile. A traffic signal needs to be installed at this intersection rather than a four way stop or a roundabout.

### **Anderson Road**

- Six foot shoulders should be constructed on Anderson Road.
- Widen Anderson Road between Shintaffer Road and Blaine Road and add bike and pedestrian paths.

### **Harborview Road**

- Six foot shoulders are needed on Harborview Road.
- Six foot shoulders on Harborview Road do not exist as your map indicates.

### **Birch Point Road**

- The section of Birch Point Road between Selder Road and Birch Bay Drive experiences severe congestion and vehicles traveling at high rates of speed.
- Steep grade being constructed on Birch Point Road will be dangerous in winter when roads are icy.

- It needs to be determined what effect construction on Birch Point Road will have on existing flood conditions and lakes in Birch Bay Village.

### **Bay Point Road**

- Close Bay Point Road to the public and allow access exclusively to land owners. Add beach parking and bike and pedestrian paths.

### **Jackson Road**

- Jackson Road is too narrow. (2)

### **Other Locations**

- Construct extension from Selder Road to Semiahmoo Parkway.
- Construct a causeway between Cherry Street in Blaine and Shintaffer Road in Birch Bay.
- New road needs to be built parallel to Birch Bay Drive between Birch Bay-Lynden Road and Alderson Road.
- Construct a roadway parallel to Blaine Road and Birch Bay Drive. Birch Bay is in need of an alternative way to drive around the bay.



# December 2007 – Birch Bay Subarea Plan Update Open House Summary

## Purpose and format

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Whatcom County hosted an open house in Birch Bay at the Birch Bay Bible Community Church from 6:00 p.m. – 8:00 p.m. on December 11, 2007.

The purpose of the open house was to solicit feedback from the public on the list of proposed transportation improvement projects being considered for the Birch Bay Urban Growth Area (UGA).



Attendees were able to learn about the current condition of the transportation system in Birch Bay, areas where growth is anticipated, transportation issues that have already been identified by the community, and the potential improvement projects that may be used to address transportation issues.

Display boards were placed at stations around the room to provide information to the attendees. Attendees were asked to share their feedback, both written and verbal, on the information presented to them as well as provide feedback on the list of proposed improvement projects for the Birch Bay area.

A brief presentation was given at 6:45 pm to provide an overview of the existing and future traffic conditions in the Birch Bay area and to review the list of proposed improvement projects and funding strategies to address transportation issues in the community. The project team was available before and after the presentation to answer questions and talk with attendees.

## Summary of comments

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Forty-two (42) people attended the open house. Eight (8) people filled out a comment form and fifteen (15) comments were left on the flip charts that were displayed around the room. The project team also recorded comments from attendees.

There were two primary themes noted from the comments:

- The majority of the comments received focused on the need for a network of bike and pedestrian paths throughout the community.

- Many of the comments also suggested the need for improved public transportation to serve a larger area and run more frequently.

Two attendees provided the project team with suggestions via written letters regarding transportation issues in the area:

- The Blaine Municipal Airport is an important component of the community and should not be closed.
- 1) Priority should not be given to the widening of Grandview Road from Lincoln Road to Point Whitehorn Road. 2) Capital investment to make downtown Birch Bay a countywide and regional attractor through implementation of the Design Guidelines efforts of the Steering Committee in 2006 and early 2007.

### **Additional comments by theme**

Additional comments from the open house are summarized below. They are organized by theme (*the number in parentheses indicates the frequency of the question or comment*).

#### **General Comments**

- Many roads in the Birch Bay and Blaine area have striping that is barely visible. Repaint the areas that have faded. (2)
- Road side ditches are dangerous and need to be improved. (2)
- Use Birch Bay tax dollars for improvements in Birch Bay.
- Implement moratorium on growth if roads and other transportation infrastructure can not be in place.
- Prioritize transportation improvements along bus routes.
- Access to and from Birch Bay is restricted if a train is stopped on the tracks.
- Improve the existing transportation infrastructure so that it can support larger commercial area.
- The UGA does not include critical surrounding areas that are related to the forecasted growth and transportation challenges.
- Need east/west road from Birch Bay Drive to Blaine Road about midway between Birch Bay-Lynden Road and Alderson Road.
- Need north/south road from Birch Bay-Lynden Drive to Alderson Road between Birch Bay Drive and Blaine Road.

#### **Public and Non-Motorized Transportation**

- Add bike and pedestrian paths in Birch Bay. (8)
- Increase public transportation in Birch Bay. (3)
- Improve shoulders in Birch Bay for pedestrians and bikers. (2)

#### **Speed Limit**

- The speed limit in Birch Bay Village should be lowered year round. (2)



- Radar speed signs would be a good investment for Birch Bay Drive.

**Water Quality**

- Preserve the water quality in the bay by treating storm water runoff. (3)



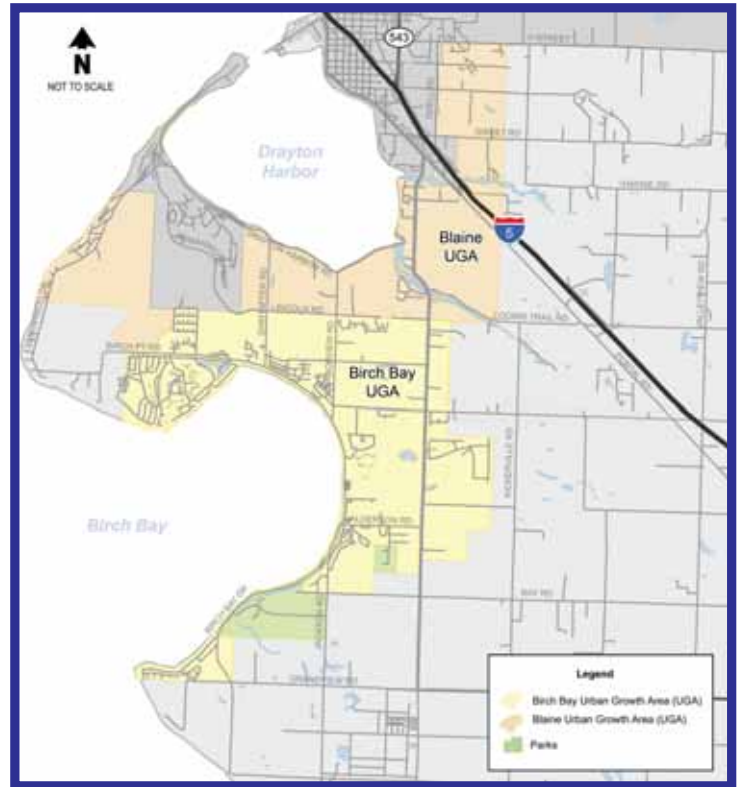
# Birch Bay Subarea Transportation Plan Update

## Planning the future transportation system in Birch Bay

- The Birch Bay Subarea Transportation Plan, originally adopted in September 2004, is being updated in 2008 to include a list of recommended transportation improvement projects and policies to improve safety and address the growth anticipated in the Birch Bay area over the next 20 years
- The County is identifying and evaluating roadway, non-motorized, and transit options and developing an updated plan that incorporates community priorities and addresses funding and implementation strategies
- Input from commuters, residents, recreational users and businesses is important to help identify and establish the community's priorities when addressing the transportation needs in the subarea
- The Birch Bay Subarea Transportation Plan update is being developed in parallel with the County's current efforts to develop a transportation concurrency management program and transportation impact fee program

For more information about these and other county planning efforts, visit the County Planning and Development Services Web site at:

<http://www.co.whatcom.wa.us/pds/planning/index.jsp>



Birch Bay Subarea Transportation Plan Update Study Area

UGA = Urban Growth Area

## Birch Bay Subarea Transportation Plan Update Timeline

### Spring 2007

- Looked at a snapshot of the transportation system in Birch Bay today
- Gathered data on existing land uses, safety problems, traffic circulation and congestion

### June 2007

- Hosted a public open house to gather community concerns and identify local transportation issues

### Summer/Fall 2007

- Looked at what the transportation system may look like in the future
- Gathered data on household and employment growth, potential safety impacts, and future traffic patterns
- Identified potential improvement projects to address these concerns, including non-motorized and transit opportunities

### December 2007

- Hosted a second public open house to gather feedback on the potential improvement projects and the community's priorities

### Winter 2008

- Continue to gather public feedback
- Finalize the list of potential improvement projects
- Consider project costs, priorities, implementation strategies and funding options
- Draft the Birch Bay Subarea Transportation Plan Update

### Spring 2008

- Work with the Birch Bay community and the Whatcom County Council to review and revise the draft plan
- Finalize and adopt the updated Birch Bay Subarea Transportation Plan

## ***For more information***

Whatcom County Planning and  
Development Services Web site

<http://www.co.whatcom.wa.us/pds/planning/index.jsp>

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### **John Everett**

Transportation Planner  
Planning and Development Services

5280 Northwest Drive  
Bellingham, WA 98226  
360-676-6907

***[JEverett@co.whatcom.wa.us](mailto:JEverett@co.whatcom.wa.us)***





# Birch Bay Subarea Transportation Plan Update

## What are the challenges?

Whatcom County has identified issues that need to be addressed in the Birch Bay and Blaine Urban Growth Areas (UGA), based on population and economic growth projections, traffic and safety data, and feedback from the local community.

### Residential growth

- Approximately 7,800 households are expected to be added in the Birch Bay UGA, City of Blaine, and the Blaine UGA by the year 2027.

### Employment growth

- Approximately 2,500 employees are expected to be added in the Birch Bay UGA, City of Blaine, and the Blaine UGA by the year 2027.

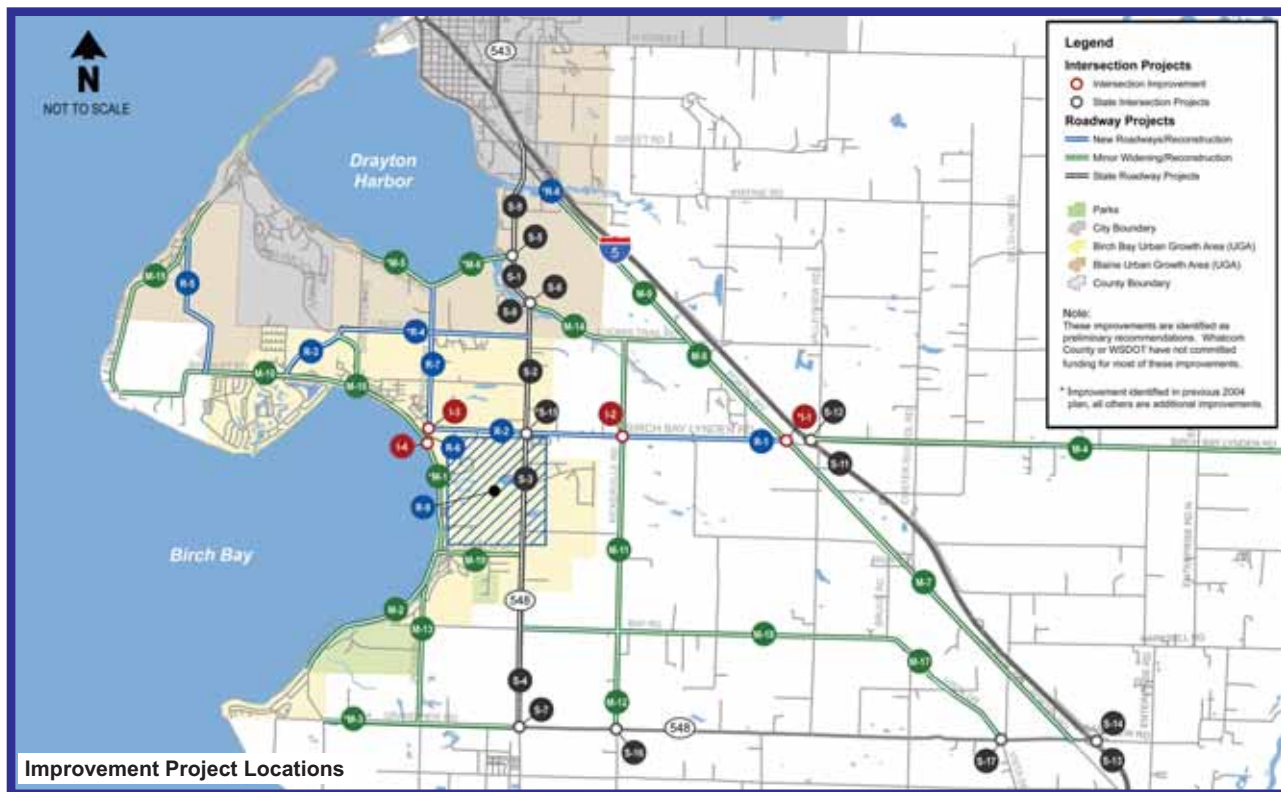
### Collisions and traffic delays

- Safety issues have been identified on parts of Birch Bay Drive, Birch Bay-Lynden Road, Bay Road, Portal Way and Grandview Road.
- Intersections that are currently congested within or near the Birch Bay UGA during afternoon peak hours traffic include the intersections of Birch Bay-Lynden Road with Harborview Road, Portal Way, Interstate-5 and Valley View Road, and the intersection of Birch Bay Drive and Harborview Road.

## Preliminary Recommended Improvement Projects

Whatcom County has identified 43 potential improvement projects through the plan update process in addition to the 8 transportation projects that were already included in the original 2004 Birch Bay Subarea Transportation Plan.

These improvement projects will foster development of the future transportation network for the Birch Bay area, and support a balance of motorized and non-motorized transportation facilities as well as expanded transit service needs. The community's priorities will need to be established, as it will not be realistic for the county, neighboring cities or the Washington State Department of Transportation, who will be responsible for implementing these projects, to fully fund and construct all of these improvements in the short term.



Project Group	Project Group ID	Project Name	Project Description	Relative Priority	Total Project Cost (\$1,000,000s) Estimated
INTERSECTIONS PROJECTS	I-1*	Birch Bay- Lynden Road / Portal Way	Construct intersection improvements to include turn lanes and install traffic signal when warranted.	High	\$3,000,000
	I-2	Birch Bay-Lynden Road / Kickerville Road	Construct intersection improvements to include roundabout or install turn lanes and traffic signal, when warranted.	Medium	\$3,000,000
	I-3	Birch Bay-Lynden Road / Harborview Road	Construct intersection improvements to include turn lanes and install traffic signal when warranted.	High	\$3,000,000
	I-4	Birch Bay Drive / Harborview Road	Improve/ redesign the intersection with turn lanes, and install traffic signal when warranted.	High	\$3,000,000
NEW ROADWAYS AND MAJOR WIDENING OR RECONSTRUCTION PROJECTS	R-1	Birch Bay-Lynden Road Widening	Widen to rural major collector standards including turn lanes at major access locations and paved shoulders for non-motorized trips.	High	\$1,500,000
	R-2	Birch Bay-Lynden Road Widening	Widen to urban principal arterial standards including turn lanes and non-motorized facilities.	High	\$1,800,000
	R-3	Birch Point Connector Road	Construct new 2-lane connection at urban standards including non-motorized facilities and new intersection with Semiahmoo Drive.	High	\$2,000,000
	R-4*	Lincoln Road Extension and Improvement	Reconstruct existing road and construct 2-lane urban arterial to Blaine Road with non-motorized enhancement including construction of roundabouts at intersections with Blaine Road and Harborview Road.	High	\$9,000,000
	R-5	West Blaine UGA Connector Road	Construct new 2-lane road to urban standards between Birch Point Road and Semiahmoo Drive to serve future urban development.	Low	\$4,800,000
	R-6	Harborview Road	Improve roadway to urban principal arterial standards including non-motorized facilities.	High	\$200,000
	R-7	Harborview Road	Improve roadway to major collector standards including non-motorized facilities.	Low	\$1,000,000
	R-8*	Portal Way/Dakota Creek Bridge #500	Bridge replacement or rehabilitate structure	Medium	\$5,000,000
	R-9	Commercial area circulation roads	Local circulation urban road(s) as part of future development.	Medium	\$6,000,000
MINOR WIDENING AND RECONSTRUCTION PROJECTS	M-1*	Birch Bay Drive	Improve roadway to urban minor arterial standards including non-motorized facilities.	High	\$5,000,000
	M-2	Birch Bay Drive	Improve to urban minor arterial standards including non-motorized facilities.	Medium	\$1,800,000
	M-3*	Grandview Road	Improve to rural collector road standards with paved shoulders for non-motorized travel.	Low	\$3,000,000
	M-4	Birch Bay-Lynden Road	Improve to rural major collector standards including paved shoulders for non-motorized travel.	Medium	\$5,000,000
	M-5*	Drayton Harbor Road	Reconstruct, repair road slope and pavement and upgrade roadway.	Medium	\$1,800,000
	M-6*	Drayton Harbor Road	Improve to rural collector standards with shoulders for non-motorized travel.	Medium	\$1,800,000
	M-7	Portal Way	Reconstruct to major collector standards including paved shoulders for non-motorized travel.	Low	\$3,000,000
	M-8	Portal Way	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	Medium	\$1,200,000
	M-9	Portal Way	Reconstruct to major collector standards including paved shoulders for non-motorized travel.	Low	\$1,800,000
	M-10	Birch Point Road	Reconstruct to urban minor arterial standards including non-motorized facilities	Low	\$3,000,000
	M-11	Kickerville Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	Low	\$2,400,000
	M-12	Kickerville Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	Low	\$650,000
	M-13	Jackson Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	Low	\$1,200,000
	M-14	Loomis Trail Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	High	\$1,200,000
	M-15	Semiahmoo Drive	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	Low	\$2,000,000
	M-16	Shintaffer Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	Low	\$600,000
	M-17	Vista Drive	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	Medium	\$1,500,000
	M-18	Bay Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	Medium	\$2,600,000
	M-19	Alderson Road	Reconstruct to rural collector standards including paved shoulders for non-motorized travel.	Medium	\$600,000
STATE ROUTE PROJECTS	S-1	Blaine Road (SR 548)	Reconstruct and widen to add turn lanes and shoulders/non-motorized facilities at urban standards (WSDOT standards).	High	\$6,000,000
	S-2	Blaine Road (SR 548)	Reconstruct and widen to add turn lanes and shoulders/non-motorized facilities at urban standards (WSDOT standards).	High	\$5,000,000
	S-3	Blaine Road (SR 548)	Reconstruct and widen to add turn lanes and non-motorized facilities to meet urban standards (WSDOT standards).	Medium	\$7,000,000
	S-4	Blaine Road (SR 548)	Reconstruct to rural collector standards (WSDOT standards), including replacement of culvert at Terrell Creek.	Medium	\$4,000,000
	S-5	Blaine Road (SR 548) / Drayton Harbor Road	Improve/redesign the intersection with turn lanes and Install traffic signal when warranted.	High	\$2,000,000
	S-6	Blaine Road (SR 548) / Loomis Trail Road	Improve/redesign the intersection with turn lanes and Install traffic signal when warranted.	Medium	\$2,000,000
	S-7	Blaine Road (SR 548) / Grandview Road	Improve/ redesign the intersection , and Install traffic signal with turn lanes when warranted or a roundabout facility	High	\$2,000,000
	S-8	Blaine Road (SR 548) / California Creek Bridge Replacement	Bridge replacement or rehabilitate structure	Medium	\$6,500,000
	S-9	Blaine Road (SR 548) / Dakota Creek Bridge Replacement	Bridge replacement or rehabilitate structure	Medium	\$13,000,000
	S-10	I-5 / Blaine exit Interchange Reconstruction	Rebuild I-5 Exit 276 (Blaine Interchange)	High	\$14,000,000
	S-11	On and Off ramps of I-5 / Birch Bay-Lynden Road Interchange	Improve/ redesign the ramps intersection with turn lanes and Install traffic signal when warranted	High	\$3,400,000
	S-12	I-5 / Birch Bay-Lynden Road Interchange	Major reconstruction of interchange at Birch Bay-Lynden Road	Medium	N/A
	S-13	I-5 / Grandview Rd Interchange	Improve/ redesign the ramps intersection with turn lanes and install traffic signal, when warranted	Medium	\$3,500,000
	S-14	I-5 / Grandview Road Interchange	Reconstruction of interchange at Grandview Road	Medium	N/A
	S-15*	Birch Bay- Lynden Road / Blaine Road (SR 548)	Construct intersection improvements to include roundabout or install turn lanes and traffic signal, when warranted.	High	\$3,000,000
	S-16	Grandview Road (SR 548) / Kickerville Road	Construct intersection improvements to include roundabout or install turn lanes and traffic signal, when warranted.	Medium	\$3,000,000
	S-17	Grandview Road (SR 548) / Vista Drive	Construct intersection improvements to include roundabout or install turn lanes and traffic signal, when warranted.	High	\$3,000,000
OTHER MODE	O-1	Park & Ride Facility	Construct new park & ride lot ( or 2 smaller lots) with defined parking stalls capacity to serve Birch Bay, Semiahmoo, and Blaine.	Medium	N/A
	O-2	Increase Transit Service	Increase transit service between Birch Bay and Blaine, Ferndale, and Bellingham.	Medium	N/A

1 Represents planning level project cost estimates. Project costs will be refined during the project design phase.

**Notes:**

These improvements are identified as preliminary recommendations. Whatcom County or WSDOT have not committed funding for most of these improvements.

\* Improvement identified in previous 2004 plan, all others are additional improvements.





# Birch Bay Subarea Transportation Plan Update

## What have we heard from the Birch Bay community?



Whatcom County held two public open houses in June and December of 2007 to gather feedback from the local community and identify other issues to be addressed by the subarea plan update. Recommendations from the community included the following comments:

- "We need more reliable access to and from I-5. Birch Bay-Lynden Road can not handle the current traffic volumes."
- "Emergency vehicles that service the Birch Bay area need direct access to and from I-5 without having to wait at the train crossing."
- "Consider connecting Lincoln Road between Harborview Road and Blaine Road to create additional east-west access for our community."
- "Please increase public transportation service in Birch Bay."
- "Key areas in our community need to be connected with bike paths. All roads should have improved shoulders to allow bike and pedestrian travel, and a safe place for drivers to pull off the road."
- "The speed limit should be decreased year round on Birch Bay Drive."



## Funding strategies

**The total cost to implement the proposed improvements is \$160.85 million**

Current available funding will not be able to cover all of the identified potential improvement projects. A funding strategy will be incorporated into the transportation plan update and will identify a number of potential funding sources which may include:

- local, county, city, state or federal funds
- impact fees or other developer improvements
- grants
- legislative appropriations



# Concurrency Management and Impact Fee Program Development

Whatcom County is planning ahead for the growth expected to occur over the next twenty years. The County is committed to implementing policies and plans to keep your communities safe, move our economy forward, and maintain the quality of life unique to our community.

To better tie transportation improvements with new development, Whatcom County is developing two transportation programs – a Transportation Concurrency Management Program and a Transportation Impact Fee Program.

## What is transportation concurrency?

- Counties are required by the Washington State Growth Management Act (GMA) to ensure that its transportation system can adequately support approved developments in a timely manner, or concurrent with development
- The County cannot approve a new development if the transportation system will not meet adopted service standards with the additional impact of that development, unless measures to accommodate that development are agreed upon and implemented along with the project
- The Transportation Concurrency Management Program will update the interim program adopted in December 2007
- The end result will be a program that aligns with the County's vision for a safe and efficient transportation system that will support the projected population and employment growth with the available funding resources

## What are transportation impact fees?

- Transportation impact fees are a tool that can be used by Whatcom County under the GMA to help fund transportation improvements necessary to help offset the impacts of growth
- The fees are collected as a part of the approval process for a new development, and are used to help fund transportation improvements needed to serve new growth
- The amount charged is based on the additional demand on the transportation system that will be created by the new development and the cost of the improvements to meet that demand
- These fees cannot be used to resolve existing deficiencies or to fully fund the cost of needed transportation improvements
- Impact fees must be used in combination with other potential funding sources to pay for improvements



## Birch Bay Subarea Transportation Plan Update Timeline

### Spring 2007

- Looked at a snapshot of the transportation system in Birch Bay today
- Gathered data on existing land uses, safety problems, traffic circulation and congestion

### June 2007

- Hosted a public open house to gather community concerns and identify local transportation issues

### Summer/Fall 2007

- Looked at what the transportation system may look like in the future
- Gathered data on household and employment growth, potential safety impacts, and future traffic patterns
- Identified potential improvement projects, including non-motorized and transit opportunities

### December 2007

- Hosted a second public open house to gather feedback on the potential improvement projects and the community's priorities

### Winter 2008

- Continue to gather public feedback
- Finalize the list of potential improvement projects
- Consider project costs, priorities, implementation strategies and funding options
- Draft the Birch Bay Subarea Transportation Plan Update

### Spring 2008

- Work with the Birch Bay community and the Whatcom County Council to review and revise the draft plan
- Finalize and adopt the updated Birch Bay Subarea Transportation Plan

## For more information

Whatcom County Planning and Development Services Web site:  
<http://www.co.whatcom.wa.us/pds/planning/index.jsp>

### John Everett

Transportation Planner Planning and Development Services  
5280 Northwest Drive . Bellingham, WA 98226  
(360) 676-6907  
[JEverett@co.whatcom.wa.us](mailto:JEverett@co.whatcom.wa.us)



## Birch Bay Subarea Transportation Plan Update

### Planning the future transportation system in Birch Bay

- The Birch Bay Subarea Transportation Plan, originally adopted in September 2004, is being updated in 2008 to include a list of recommended transportation improvement projects and policies to improve safety and address the growth anticipated in the Birch Bay area over the next 20 years
- The County is identifying and evaluating roadway, non-motorized, and transit options and developing an updated plan that incorporates community priorities and addresses funding and implementation strategies
- Input from commuters, residents, recreational users and businesses is important to help identify and establish the community's priorities when addressing the transportation needs in the subarea
- The Birch Bay Subarea Transportation Plan update is being developed in parallel with the County's current efforts to develop a transportation concurrency management program and transportation impact fee program

Birch Bay Subarea Transportation Plan Update Study Area



UGA = Urban Growth Area

## For more information

For more information about these and other county planning efforts, visit the County Planning and Development Services Web site at:

<http://www.co.whatcom.wa.us/pds/planning/index.jsp>



## What are the challenges?

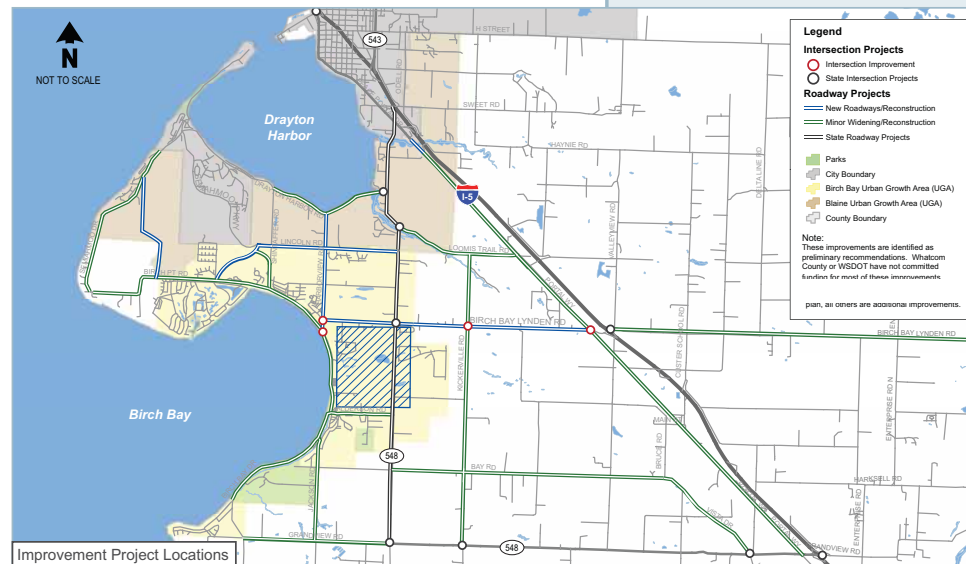
Whatcom County has identified issues that need to be addressed in the Birch Bay and Blaine Urban Growth Areas (UGA), based on population and economic growth projections, traffic and safety data, and feedback from the local community.

### Preliminary Recommended Improvement Projects

Whatcom County has identified 43 potential improvement projects through the plan update process in addition to the 8 transportation projects that were already included in the original 2004 Birch Bay Subarea Transportation Plan.

These improvement projects will foster development of the future transportation network for the Birch Bay area, and support a balance of motorized and non-motorized transportation facilities as well as expanded transit service needs. The community's priorities will need to be established, as it will not be realistic for the county, neighboring cities or the Washington State Department of Transportation, who will be responsible for implementing these projects, to fully fund and construct all of these improvements in the short term.

For more detailed information about the preliminary recommended improvement projects shown on the map below, please contact John Everett at (360) 676-6907.



#### Residential growth

- Approximately 7,800 households are expected to be added in the Birch Bay UGA, City of Blaine, and the Blaine UGA by the year 2027.

#### Employment growth

- Approximately 2,500 employees are expected to be added in the Birch Bay UGA, City of Blaine, and the Blaine UGA by the year 2027.

#### Collisions and traffic delays

- Safety issues have been identified on parts of Birch Bay Drive, Birch Bay-Lynden Road, Bay Road, Portal Way and Grandview Road
- Intersections that are currently congested within or near the Birch Bay UGA during afternoon peak hours traffic include the intersections of Birch Bay-Lynden Road with Harborview Road, Portal Way, Interstate-5 and Valley View Road, and the intersection of Birch Bay Drive and Harborview Road.

## What have we heard from the Birch Bay community?



Whatcom County held two public open houses in June and December of 2007 to gather feedback from the local community and identify other issues to be addressed by the subarea plan update. Recommendations from the community included the following comments:

- "We need more reliable access to and from I-5. Birch Bay-Lynden Road can not handle the current traffic volumes."
- "Emergency vehicles that service the Birch Bay area need direct access to and from I-5 without having to wait at the train crossing."
- "Consider connecting Lincoln Road between Harborview Road and Blaine Road to create additional east-west access for our community."
- "Please increase public transportation service in Birch Bay."
- "Key areas in our community need to be connected with bike paths. All roads should have improved shoulders to allow bike and pedestrian travel, and a safe place for drivers to pull off of the road."
- "The speed limit should be decreased year round on Birch Bay Drive."



### Funding strategies

**The total cost to implement the proposed improvements is \$160.85 million**

Current available funding will not be able to cover all of the identified potential improvement projects. A funding strategy will be incorporated into the transportation plan update and will identify a number of potential funding sources which may include:

- local, county, city, state or federal funds
- impact fees or other developer improvements
- grants
- legislative appropriations

# ATTACHMENT B

## LEVEL OF SERVICE DEFINITIONS

## Highway Capacity Manual, 2000

**Signalized intersection** level of service (LOS) is defined in terms of the average total vehicle delay of all movements through an intersection. Vehicle delay is a method of quantifying several intangible factors, including driver discomfort, frustration, and lost travel time. Specifically, LOS criteria are stated in terms of average delay per vehicle during a specified time period (for example, the PM peak hour). Vehicle delay is a complex measure based on many variables, including signal phasing (i.e., progression of movements through the intersection), signal cycle length, and traffic volumes with respect to intersection capacity. Table 1 shows LOS criteria for signalized intersections, as described in the *Highway Capacity Manual* (Transportation Research Board, Special Report 209, 2000).

**Table 1. Level of Service Criteria for Signalized Intersections**

Level of Service	Average Control Delay (sec/veh)	General Description (Signalized Intersections)
A	≤10	Free Flow
B	>10 - 20	Stable Flow (slight delays)
C	>20 - 35	Stable flow (acceptable delays)
D	>35 - 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	>55 - 80	Unstable flow (intolerable delay)
F	>80	Forced flow (jammed)

Source: *Highway Capacity Manual*, Transportation Research Board, Special Report 209, 2000.

**Unsignalized intersection** LOS criteria can be further reduced into two intersection types: all-way stop-controlled and two-way stop-controlled. All-way, stop-controlled intersection LOS is expressed in terms of the average vehicle delay of all of the movements, much like that of a signalized intersection. Two-way, stop-controlled intersection LOS is defined in terms of the average vehicle delay of an individual movement(s). This is because the performance of a two-way, stop-controlled intersection is more closely reflected in terms of its individual movements, rather than its performance overall. For this reason, LOS for a two-way, stop-controlled intersection is defined in terms of its individual movements. With this in mind, total average vehicle delay (i.e., average delay of all movements) for a two-way, stop-controlled intersection should be viewed with discretion. Table 2 shows LOS criteria for unsignalized intersections (both all-way and two-way, stop-controlled).

**Table 2. Level of Service Criteria for Unsignalized Intersections**

Level of Service	Average Control Delay (sec/veh)
A	0 - 10
B	>10 - 15
C	>15 - 25
D	>25 - 35
E	>35 - 50
F	>50

Source: *Highway Capacity Manual*, Transportation Research Board, Special Report 209, 2000.

# ATTACHMENT C

## FORECAST LAND USE

### METHODOLOGY TECHNICAL

### MEMORANDUM

## MEMORANDUM

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<b>Date:</b>	October 23, 2007	<b>TG:</b>	06229.00
<b>To:</b>	John Everett, Whatcom County		
<b>From:</b>	Patrick Lynch, AICP, The Transpo Group Carmen Bendixen, The Transpo Group		
<b>Subject:</b>	DRAFT Birch Bay Subarea Land Use Methodology		

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This memorandum summarizes The Transpo Group's process for updating the existing and forecast land use in support of the travel demand modeling effort for the Birch Bay Subarea Transportation Plan. The land use data generates the transportation demands that are the foundation on which the Plan is based. The main objective of this process is to establish the existing baseline and future forecast that provides a reasonable basis to assess future land use and transportation system needs for the Birch Bay area.

The following outlines the general process for updating the land use for the Birch Bay area:

- Reviewed and refined the Transportation Analysis Zone structure for the Birch Bay area
- Updated existing land use data for the study area based on Whatcom Council of Governments (WCOG) 2005 land use data and a county-wide aerial photo.
- Updated forecast land use based on WCOG 2027 land use data and economic data provided by ECONorthwest.

The following exhibits and appendices are attached:

- Exhibit 1 – Original WCOG Model TAZs in Birch Bay Subarea
- Exhibit 2 – Refined Whatcom County Model TAZs in Birch Bay Subarea
- Exhibit 3 – Household Land Use in Birch Bay Subarea
- Exhibit 4 – Employment Land Use in Birch Bay Subarea
- Exhibit 5 – Blaine and Birch Bay Population and Employment Estimates
- Exhibit 6 – Birch Bay UGA and Blaine City and UGA Land Use Controls
- Appendix A – ECONorthwest Land Use Evaluation Memorandum
- Appendix B – Final 2005 and 2027 Land Use Tables

## Transportation Analysis Zone (TAZ) Structure

The TAZ structure from the WCOG model provided the starting point for the Birch Bay Subarea Transportation Plan travel forecasting model. From this structure, a refined TAZ structure was developed for the Birch Bay area to provide the added detail needed for preparing the Birch Bay Subarea Transportation Plan. The additional detail is needed for evaluating transportation system needs on collectors and at intersections serving the subarea. **Exhibits 1 and 2** illustrate the locations of the original TAZs and the new refined TAZs.

The Birch Bay Subarea model includes all TAZs within the Birch Bay Urban Growth Area (UGA), and TAZs covering the adjacent Blaine UGA. TAZs south and east of the Birch Bay UGA also were included to ensure primary travel corridors serving the Birch Bay Subarea were included in the analyses. This includes trip producers and attractors as far south as the Cherry Point Refinery and east of I-5.

A total of 30 original WCOG TAZs were the focus of the Birch Bay Subarea for the more detailed travel forecasting purposes of the Subarea Plan. For the size of this geographic area, the number and size of these TAZs in the Birch Bay Study area were not as sufficient as desired; therefore, the original TAZs had to be divided into smaller and more distinct zones.

The WCOG TAZs and land use allocations within the selected travel forecast model subarea boundary were entered into an Excel spreadsheet for allocation and analysis purposes. These TAZs were subdivided and the WCOG boundaries were refined to support the more detailed model. The refinement was based on the locations of the UGA boundaries, natural features, the roadway network, and zoning designations. The new set of subarea TAZs was renumbered. The original 30 TAZs were divided into 116 refined TAZs as shown on Exhibit 2. WCOG TAZs outside of this area were not modified as part of the planning process.

## Existing (2005) Land Use

The existing land use data from the original WCOG TAZs were allocated to new TAZs. The allocation was made based on zoning designations and review of aerial photographs. Certain adjustments were made to the Birch Bay Subarea's land use allocation. Such changes are necessary in the typical process of refining larger TAZs into more refined geographical units. Besides the need to divide each original WCOG TAZ down to several smaller TAZs, the household and employment allocated to each larger TAZ also needed to be divided appropriately among the new smaller TAZs.

### *Households*

The County's GIS aerial photo was used to assign existing households to the refined TAZs. The total number of residential structures within the study area based on the aerial photo did not directly match the WCOG household estimates for individual WCOG TAZs. Since a reasonably accurate assessment of the number of households

in the subarea is essential to producing a reliable calibration for the travel demand model, the original land use estimates were adjusted. **Exhibit 3** shows the summary of existing households for districts for the Birch Bay study area (the land use summary districts, which are aggregates of the smaller TAZs, are only used to illustrate the data).

Based on the count of existing development from the aerial photo, the Transpo team re-allocated land uses in certain TAZs. These TAZs were selected for adjustments based on the size of the discrepancy between the development shown in the aerial photo and the amount of land use allocated to each WCOG TAZ. For example, the aerial photo indicated approximately 10 households in TAZ 512, while the previous WCOT model had 283 households (based on WCOG's original land use allocation). These types of adjustments result from the more refined review of land use in individual TAZs which can be better addressed at a subarea planning level instead of at the Countywide level conducted by the WCOG.

During the model calibration process, it became clear that the types of households in the Birch Bay and Blaine UGAs do not follow the typical household trip generation pattern. The team's background knowledge of the region confirmed that the Birch Bay Subarea has a significant seasonal component. Using U.S. Census data, the ratio of occupied households to "unoccupied" households (i.e., seasonal or resort households) was calculated. The census reported that the percentage of "unoccupied" households for TAZs in the subarea model ranged from under 5 percent to over 80 percent. The unoccupied households were then defined as a separate residential land use category in the model, with a reduced average trip generation rate. This additional refinement of the land use situation in the Birch Bay Subarea is intended to provide a more accurate tool for estimating existing and forecast travel demands.

The following summarizes the most significant findings and adjustments allocating existing household data within the Birch Bay and Blaine UGAs.

### **Birch Bay**

- The revised Whatcom County model identified approximately 4,085 dwelling units within the equivalent WCOG TAZs representing the Birch Bay UGA. This is approximately 630 units less than the original WCOG model. The refinement was most noticeable in the northern part of the UGA with approximately 1,465 fewer dwelling units. Another significant difference was found in the southern portion of the UGA with approximately 950 more dwelling units. **Exhibit 6** compares existing households for the refined Whatcom County model and the original WCOG model.
- WCOG TAZ 168 provides an example of the adjustments made to the original land use allocation. This rectangular zone, which is partially located in the Birch Bay UGA and partially outside the UGA, originally had 1,130 households allocated to it for the 2005 WCOG model. The County's aerial photo revealed that current development in this TAZ contained only 55 to 70



structures or households and that these were primarily within the Birch Bay UGA. The remainder of the zone is largely undeveloped. After dividing the larger zone into seven smaller zones, the reduced household total was divided among the new refined zones. The seven new TAZs contain a total of 66 households; although this allocation is significantly smaller than the original allocation of 1,130 households, it is consistent with the existing development within this TAZ.

- Several other WCOG TAZs were also modified that had significant differences between what was allocated and what was observed based on the aerial photo. These zones are generally located within Subareas 3, 4, 6, 7, and 9 as illustrated in **Exhibit 3**.

### City of Blaine and UGA

- The revised Whatcom County model identified approximately 1,900 dwelling units within the equivalent WCOG TAZs representing the City of Blaine and UGA. This is approximately 520 dwelling units lower than the original WCOG model. The refinement was most noticeable in the central part of the UGA along Drayton Harbor with a decrease of approximately 210 units. **Exhibit 6** compares existing households for the refined Whatcom County model and the original WCOG model for the Blaine UGA.
- For example, WCOG TAZ 235 is split between the Birch Bay UGA and the Blaine UGA. The original WCOG model household allocation was 543 households, but after reviewing the aerial photos, the refined Whatcom County model household allocation was reduced to 337.

### Employment

Similar to the household allocation process described above, allocating the amount of employment also relied on the use of several tools. The aerial photo was useful in identifying where existing large scale commercial development is located, as well as major industrial uses. The countywide geographic information system (GIS) data, such as land parcels and zoning, provided detailed spatial information that also aided in determining where existing employment is. **Exhibit 4** shows the resulting existing employment allocation in the Birch Bay Subarea study area.

### Birch Bay UGA

- Unlike the adjustment in the total number of households, the total existing employment in the Birch Bay UGA study area was not significantly modified from the WCOG totals. The employment was, however, reallocated to study area TAZs, as appropriate. A total of approximately 595 employees were included in the Birch Bay UGA and surrounding areas. There were some local area changes as described below. The aerial photo revealed some commercial activity located in the central area of the Birch Bay UGA, specifically in TAZs



556 and 554. These areas are zoned General Commercial. Approximately 75 employees were allocated to these two TAZs.

- The Cherry Point refinery is located south of the Birch Bay UGA. Employment at the refinery is significant as it relates to the traffic volumes and operations of the study area transportation network. Based on information provided by the refinery's representative, the existing (2005) full time employment is reported at 800 employees. Contractor employees can add between 400 and 1,200 more employees depending on work fluctuations. A typical work day at the site experiences approximately 1,100 employees. Approximately 2/3 of those employees (approximately 735 employees) are expected to leave the site in the PM peak period (between 4 pm and 7 pm). Based on these data, the refined Whatcom County model allocated 800 employees to the TAZ for model calibration purposes.

### City of Blaine and UGA

- The refined Whatcom County model identified approximately 2,875 employees within the equivalent WCOG TAZs representing the City of Blaine and its UGA. This is approximately 200 employees fewer than the original WCOG model for those TAZs. The refinement was most noticeable in the central part of the UGA with a decrease of approximately 60 employees. These employees were reallocated to other nearby TAZs outside of the Blaine UGA. **Exhibit 6** compares existing employment for the refined Whatcom County model and the original WCOG model.
- Based on the aerial photo and existing land use zoning map, the existing employment allocation outside the City of Blaine but within the UGA was limited to only a few TAZs, consistent with the largely residential nature of the land use in those areas.
- Areas of the City of Blaine and surrounding UGA with more than 20 employees are generally located in the central part of UGA (subarea 3) and the far western part of the City limits (subarea 1) as illustrated in **Exhibit 4**.

### Forecasted (2027) Land Use

Similar to the land use allocation for the 2005 base year, the land use forecasts from the WCOG model were reviewed to help support identification of transportation improvement projects for the Birch Bay Subarea Transportation Plan. Refining the land use forecasts within the subarea is needed to provide a more detailed assessment of transportation system needs.

The initial land use allocation based on the refined TAZ structure was reviewed by ECONorthwest, one of the subconsultants on the project team. ECONorthwest completed a regional population and economic forecast report for Whatcom County in 2002; the geographic boundaries of Blaine and Birch Bay in that study do **not** exactly match with the boundaries of the process described in this memorandum.

ECONorthwest provided input and recommendations based on their past work and analyses of growth in the Birch Bay and Blaine study area. See **Appendix A** for ECONorthwest’s memo summarizing their analysis.

**Exhibit 5** summarizes the land use for the two UGAs within the study area. The three population columns for 2002, 2007, and 2022 each have low, baseline, and high estimates. The three different estimates were calculated in ECONorthwest’s 2002 population and economic forecasting report in order to accommodate different regional growth scenarios.

## *Households*

After reviewing Transpo’s preliminary land use allocation spreadsheets, ECONorthwest provided additional direction for estimating growth in households within the Birch Bay and Blaine UGAs, which were incorporated into the 2027 forecasts.

### **Birch Bay UGA**

- ECONorthwest recommended using a 2.88% average annual growth rate to project Birch Bay’s population change between 2005 and 2027, compared to the original WCOG model growth rate of 1.91%. The recommended 2.88% growth rate represents the “high growth” scenario from ECONorthwest’s 2002 Whatcom County population forecast. This growth rate was applied to the lower number of existing households in the Birch Bay UGA, which was discussed above.
- The refined Whatcom County model started from a lower estimate of existing households; the growth rate is approximately 1% higher than the original WCOG model. This results in a difference in the forecast growth between 2005 and 2027 of approximately 1,115 more dwelling units in the Birch Bay UGA in the subarea model than the original WCOG model. Overall, the refined Whatcom County model forecasts approximately 485 more dwelling units than the original WCOG model for 2027 (an additional growth of 1,115 units less the 630 fewer existing dwelling units). **Exhibit 6** compares forecasted households for the refined Whatcom County model and the original WCOG model.
- As an example, WCOG TAZ 169 located in the Birch Bay UGA, originally had 13 households allocated in the existing land use allocation, but the aerial photo revealed hundreds of residential structures. The 2005 household allocation was revised to 787; considering this change, the original 2027 allocation also was revised. The 2027 WCOG household allocation was adjusted from 395 to 907 split among three smaller TAZs for the Birch Bay Subarea analysis.

## City of Blaine and UGA

- ECONorthwest recommended applying an annual growth rate of 2.19% within the City of Blaine and its surrounding UGA. Again, this is consistent with the “high growth” scenario from ECONorthwest’s 2002 Whatcom County population forecast. This rate is approximately 0.5% higher than the original 1.7% WCOG model annual growth rate for the same area. The combination of the lower number of existing housing units and the higher annual growth rate result in a 2027 forecast of 3,059 dwelling units for the subarea model. This is approximately 450 residential units less than the original WCOG 2027 forecasts.
- Based on updated information, 2,000 additional households were added in three separate TAZs in the Blaine UGA, near Semiahmoo. In addition, 1,030 more households were added in two separate TAZs in the City of Blaine near the Canadian border. The developments in which these households will be based have not yet been permitted. The 2027 horizon may be too short to realize the construction of all of these households. The additional potential growth was added to the results based on the above growth rates to ensure that transportation system needs could adequately be defined. A sensitivity analysis without some or all of the additional growth will be conducted to ascertain what additional transportation improvements are needed due to the added growth.
- The additional 3,030 dwelling units described above result in a forecast growth of approximately 4,190 household dwelling units, which results in an average annual growth rate of 5.44% for the City of Blaine and the surrounding UGA. This is approximately 2,600 more dwelling units in the refined Whatcom County model than is forecasted in the original WCOG model.
- The Semiahmoo area of Blaine within the Birch Bay Subarea also has a significant amount of household growth forecast by 2027. Based on information about pending development projects provided by Whatcom County, TAZs 563 through 568 are forecast to grow from 205 households in 2005 to 645 households by 2027.

## Employment

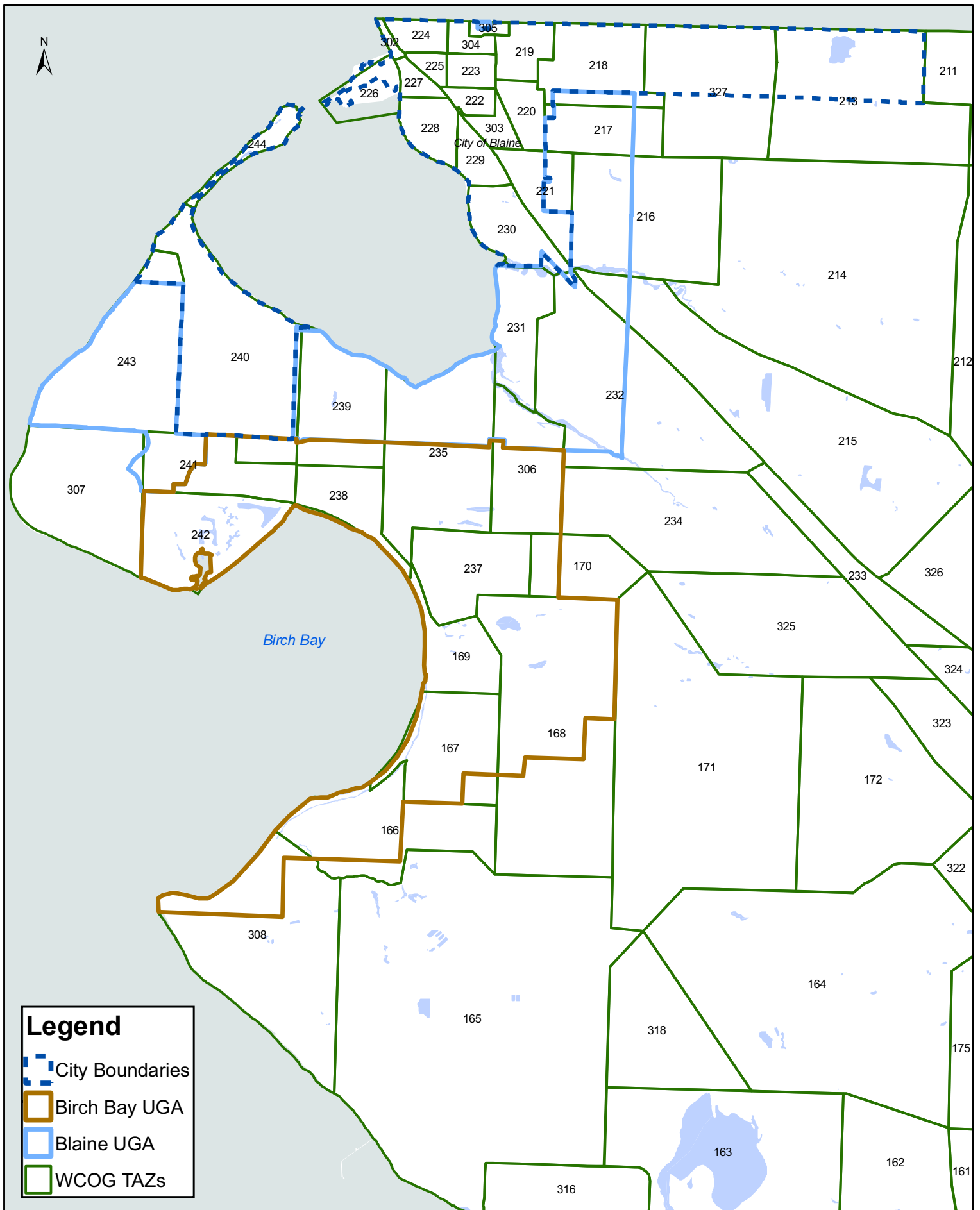
The Transpo Team revised the previous land use allocations for TAZs within the Birch Bay and Blaine UGAs based on ECONorthwest’s suggestions (see below). Based on the ECONorthwest review, the 2027 forecast employment levels for both the Birch Bay UGA and the Blaine UGA were reasonable. See **Exhibit 6** for the growth of the employment allocation in the Birch Bay Subarea.

### **Birch Bay UGA**

- As discussed in the existing land use section, the revised Whatcom County model identified approximately 50 more employees for the Birch Bay UGA than did the original WCOG model. ECONorthwest recommended using a 2.85% average annual growth rate to project Birch Bay's employment change between 2005 and 2027, while the original WCOG model identified a growth rate of 2.15%. The recommended 2.85% growth rate represents the "baseline forecast" scenario from ECONorthwest's 2002 Whatcom County population forecast.
- The refined Whatcom County model started from a slightly higher existing employment estimate and the recommended annual growth rate is approximately 0.7% higher than the original WCOG model. This results in a difference in growth (2005 to 2027) of 230 more employees for the Birch Bay subarea in the refined Whatcom County model than the original WCOG model. **Exhibit 6** compares forecasted employment for the refined Whatcom County model and the original WCOG model.
- As discussed in the existing land use section, the Cherry Point Refinery is not within the Birch Bay UGA, but it is a major employer in the Birch Bay vicinity. Based on information provided by the refinery's representative, modest growth is anticipated by 2027. An additional 100 full time employees, for a total of 900 full time employees, was assumed by 2027 for use in the refined Whatcom County model.

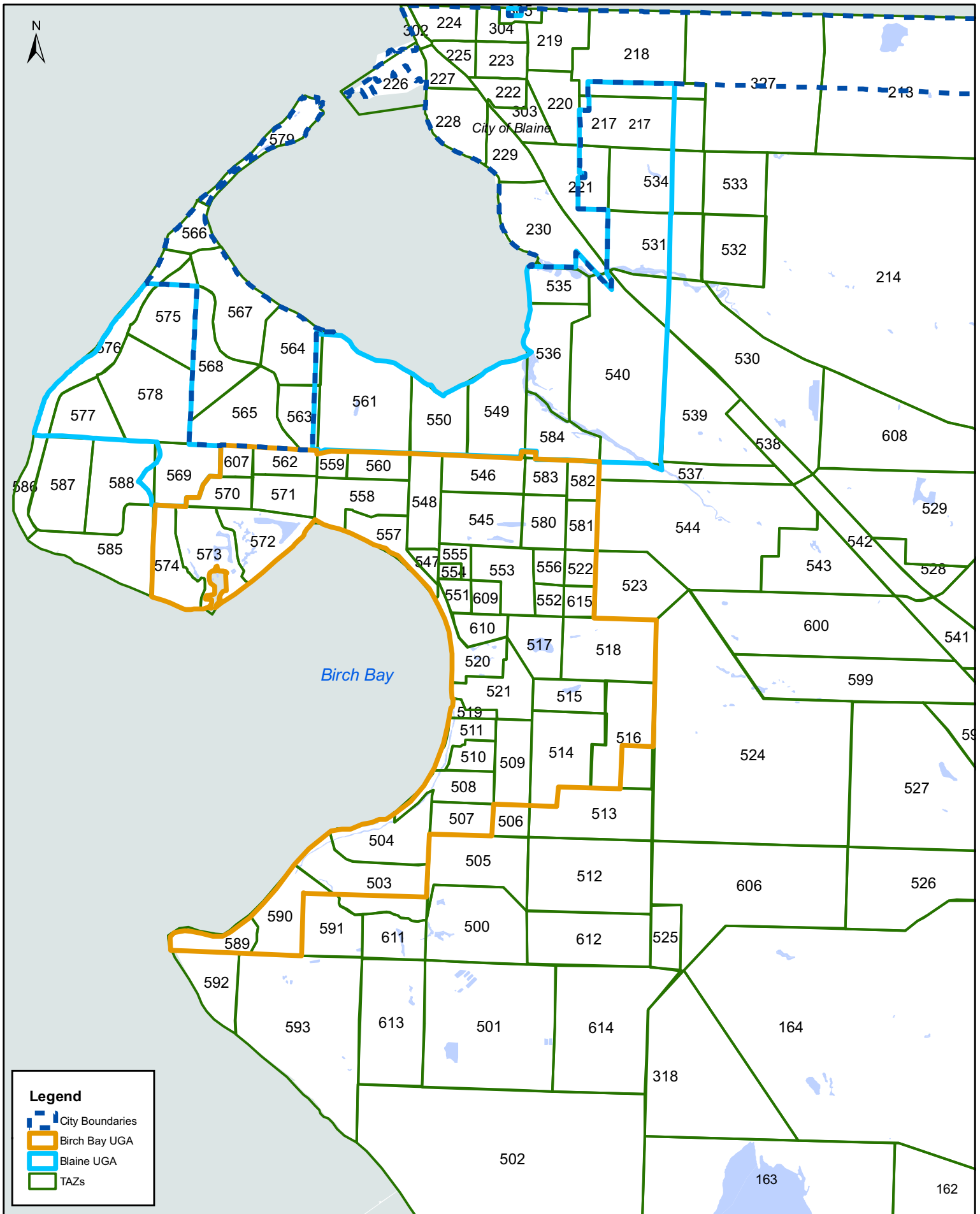
### **City of Blaine and UGA**

- Based on recent growth and ECONorthwest's employment forecast from the 2002 report, an average annual growth rate of 2.44% was recommended to forecast the City of Blaine and UGA employment from 2005 to 2027. This is consistent with the "baseline forecast" from the 2002 ECONorthwest report. This recommended growth rate is approximately 1% higher than the 1.4% annual growth rate based on the WCOG model.
- This results in approximately 690 more employees in the refined Whatcom County model than the original WCOG model. **Exhibit 6** compares forecasted employment for the refined Whatcom County model and the original WCOG model.

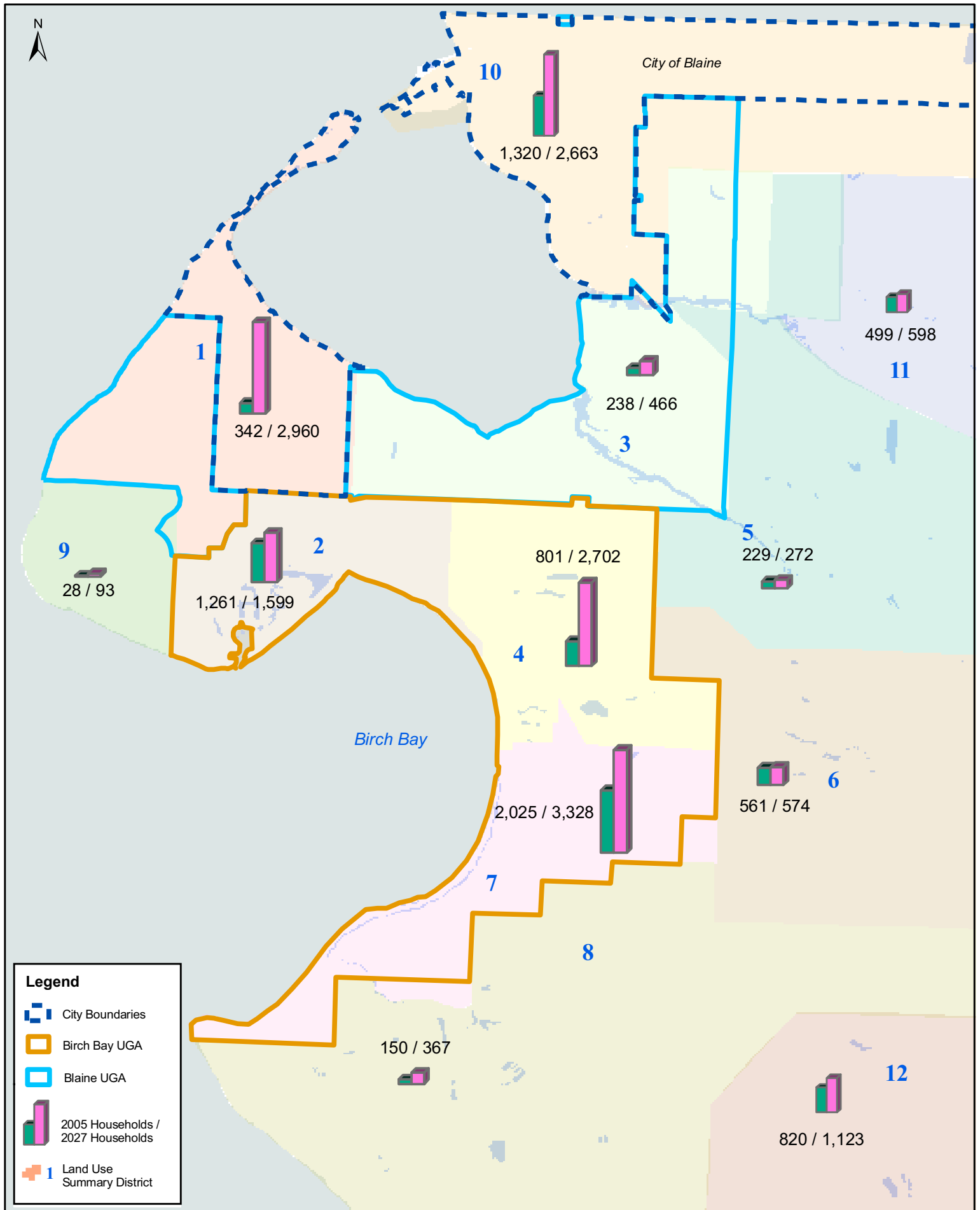


**Exhibit 1**  
 Original WCOG Model TAZs in Birch Bay Subarea  
*Birch Bay Subarea Plan*



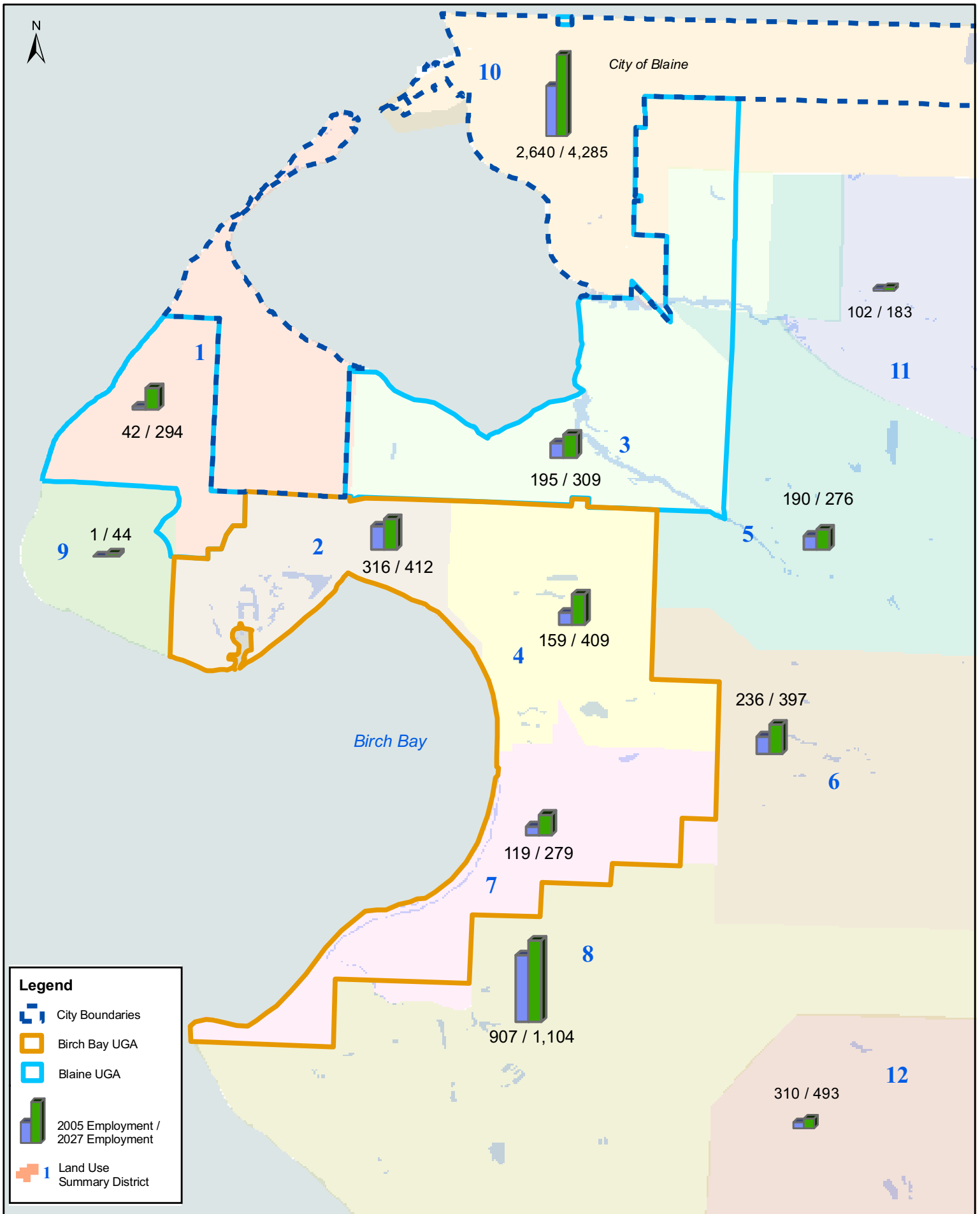


**Exhibit 2**  
 Refined Whatcom County Model TAZs in Birch Bay Subarea  
 Birch Bay Subarea Plan



**Exhibit 3**  
Household Land Use in Birch Bay Subarea  
*Birch Bay Subarea Plan*





**Exhibit 4**  
**Employment Land Use in Birch Bay Subarea**  
*Birch Bay Subarea Plan*





**Exhibit 5. Blaine & Birch Bay Population & Employment Estimates**

Population: Household Population (number of people) & Total Households (dwelling units- WCOG Data)													
	Total Households		Population			Population			Population			Total Households	
	2005 WCOG¹	2005 Refined TAZs²	2002³			2007³			2022³			2027 WCOG	2027 Refined TAZs²
			Low	Baseline	High	Low	Baseline	High	Low	Baseline	High		
Birch Bay UGA	4,716	4,087	4,605	4,721	4,815	4,941	5,265	6,004	5,764	6,912	9,619	7,145	7,629
Blaine w/UGA	2,419	1,900	4,886	4,959	5,011	5,136	5,328	5,738	5,775	6,440	7,942	3,507	6,089
TOTAL	7,135	5,987	9,491	9,680	9,826	10,077	10,593	11,742	11,539	13,352	17,561	10,652	13,718

<b>Employment: Number of Employees<sup>4</sup></b>											
	<b>2005 WCOG<sup>1</sup></b>	<b>2005 Refined TAZs<sup>2</sup></b>	<b>2001<sup>5</sup></b>	<b>2007<sup>5</sup></b>			<b>2022<sup>5</sup></b>			<b>2027 WCOG</b>	<b>2027 Refined TAZs<sup>2</sup></b>
				Low	Baseline	High	Low	Baseline	High		
Birch Bay UGA	545	593	356	473	486	507	690	741	835	870	1,100
Blaine w/UGA	3,081	2,876	1,752	2,200	2,262	2,357	3,022	3,247	3,655	4,197	4,888
<b>TOTAL</b>	<b>3,626</b>	<b>3,470</b>	<b>2,108</b>	<b>2,673</b>	<b>2,748</b>	<b>2,864</b>	<b>3,712</b>	<b>3,988</b>	<b>4,490</b>	<b>5,067</b>	<b>5,988</b>

1. The Whatcom Council of Governments (WCOG) information is compiled from the transportation analysis zones (TAZs) included in the travel demand model. The TAZ boundaries do not completely match the UGA or City boundaries; therefore, the comparison between the WCOG estimates, the refined TAZ estimates, and the ECONorthwest estimates is for illustrative purposes only.
2. These calculations were made using the adjusted number of households and the number of employees in the refined TAZs within each respective UGA; therefore, these totals differ from the original WCOG estimates. The 2005 WCOG household estimates were adjusted according to aerial image observations of current conditions in the subarea. The 2027 estimates were adjusted according to upcoming residential and commercial projects in the subarea.
3. *Whatcom County Population and Economic Forecasts*, prepared for Whatcom County by ECONorthwest, May 2002. See Tables 3-3, 3-6, 3-8.
4. WCOG uses 12 employment categories: Educational; Financial, Insurance, and Real Estate; Service; Government; Manufacturing; Retail; Wholesale; Transportation, Communications, and Utilities; Construction; Agriculture; Other; and Mining. Whatcom County Population and Economic Forecasts consolidated these categories into 3 broad employment categories: Retail; Commercial (includes employment from Service and Finance, Insurance, and Real Estate); and industrial (includes employment from Manufacturing, Transportation and Utilities, and Wholesale).
5. *Whatcom County Population and Economic Forecasts*, Tables 3-13, 3-16, 3-19, 3-20, 3-23, 3-24, 3-27. The year 2001 was the existing employment estimate year when ECONorthwest completed *Whatcom County Population and Economic Forecasts*.

## Exhibit 6: Birch Bay UGA and Blaine City/UGA Land Use Control Totals

Housholds (HH)			Employment (EMP)		
Birch Bay UGA					
	Birch Bay Subarea	WCOG		Birch Bay Subarea	WCOG
	Estimate	Original		Estimate	Original
2005	4,085	4,716	2005	593	545
2027	7,629	7,145	2027	1,100	870
	2.88%	1.91%		2.85%	2.15%
HH growth	3,544	2,429	EMP growth	507	325
Blaine City/UGA					
	Birch Bay Subarea	WCOG		Birch Bay Subarea	WCOG
	Estimate	Original		Estimate	Original
2005	1,899	2,419	2005	2,876	3,081
2027	3,059	3,507	2027	4,888	4,197
	2.19%	1.70%		2.44%	1.41%
HH growth	1,160	1,088	EMP growth	2,012	1,116
HH growth + 3,030 du's	4,190				
Refined + 3,030 du's	6,089				
	5.44%				

## Appendix A: ECONorthwest Land Use Evaluation Memorandum

# **ECONorthwest**

ECONOMICS • FINANCE • PLANNING

Phone • (541) 687-0051  
FAX • (541) 344-0562  
info@eugene.econw.com

Suite 400  
99 W. 10th Avenue  
Eugene, Oregon 97401-3001

Other Offices  
Portland • (503) 222-6060  
Seattle • (206) 622-2403

**March 27, 2007**

**TO: Jon Pascal**  
**FROM: Beth Goodman and Anne Fifield**  
**SUBJECT: EVALUATION OF THE TRANSPO GROUP'S ESTIMATE OF HOUSING AND EMPLOYMENT IN BIRCH BAY AND BLAINE**

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The Transpo Group developed population and employment estimates for Birch Bay and Blaine for the period 2005 to 2027. These estimates were used to allocate population and employment to TAZs for transportation planning purposes.

The Transpo Group asked ECONorthwest to evaluate the forecasts based on recent development, growth trends, and the forecasts presented in the "Whatcom County Population and Economic Forecasts" prepared by ECONorthwest in 2002. ECO's evaluation of the population forecasts is that the population base and growth rate assumptions for the City of Blaine are reasonable but the population base and growth rate assumptions for Birch Bay are low. Our evaluation of the employment forecasts is that the employment base for both cities are reasonable. The growth rate assumptions for employment in Birch Bay are reasonable but the growth rate assumption for employment in Blaine are probably low.

The remainder of this memorandum presents our conclusions in more detail, including an explanation of the factors we considered and information supporting our conclusions. The memorandum is organized into the following sections:

- **Evaluation of population forecasts** presents ECO's evaluation of the population base and growth assumptions
- **Evaluation of employment forecasts** presents ECO's evaluation of the employment base and growth assumptions
- **Appendix** presents additional data that ECO considered in the evaluations.

## **EVALUATION OF POPULATION FORECASTS**

This section describes ECO's evaluation of the Transpo Group's estimates of the existing population base and the population forecasts. Rather than forecasting population, the Transpo Group developed forecasts for the number of households in Birch Bay and Blaine in 2027. They began with estimates of the number of households in the Birch Bay and Blaine UGAs in 2005 as the basis for their forecasts.

## POPULATION BASE

The Transpo Group started with the Whatcom Council of Government's (WCOG) estimate of households in Blaine and Birch Bay in 2005 and refined the estimate, based on an analysis of current aerial photographs. Table 1 shows WCOG's estimate of households in 2005, the Transpo Group's refinement of the estimate of households in 2005, the Transpo Group's forecast for households in 2027, and change in population from 2005 to 2027. ECO has evaluated two items presented in Table 1: (1) the Transpo Group's estimate of housing in 2005 and (2) the Transpo Group's forecast for dwelling units in 2027.

**Table 1. Estimate of households, Blaine and Birch Bay UGAs, 2005 and 2027**

	2005 WCOG	Transpo Group		Change 2005-2027		
		2005	2027	Number	Percent	AAGR
<b>Birch Bay UGA</b>	5,103	3,734	8,426	4,692	126%	3.77%
<b>Blaine w/UGA</b>	2,235	2,035	3,351	1,317	65%	2.29%

Source: Transpo Group

Note: AAGR is average annual growth rate.

The Transpo Group estimated that Birch Bay and Blaine have fewer dwelling units than the WCOG estimate. ECO's evaluation is that the Transpo Group's estimates may be low, especially in Birch Bay.

### Blaine

The Transpo Group estimated that the Blaine UGA has about 200 fewer dwelling units than the WCOG estimate. Based on 2000 Census data and building permit activity, this estimate may be low. In 2000, the Census estimated that the City of Blaine had 1,737 dwelling units. Between 2000 and 2005, the City reported issuing building permits for 277 single-family detached units and 142 multifamily dwellings. Based on these estimates, Blaine had about 2,160 dwellings in 2005, 125 more dwellings than the Transpo Group's estimates. It is possible that some of the building permits may not have resulted in construction of a dwelling unit, making the Transpo Group's estimate closer to the actual number of dwellings in Blaine in 2005.

### Birch Bay

The Transpo Group estimated that Birch Bay had 1,369 fewer dwelling units than WCOG. ECO believes the Transpo Group's estimate of dwelling units is too low. The 2000 Census reported that the Birch Bay Census Designated Place (CDP) had 5,105 dwelling units, which is close to WCOG's estimate of dwelling units in 2005.<sup>1</sup>

Interviews with local real estate professionals in Birch Bay indicate that the area experienced significant residential development between 2002 and early 2006, consistent with regional housing trends. If is true, Birch Bay should have more dwelling units in 2005 than in 2000. Our

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<sup>1</sup> ECO was unable to obtain an estimate of building permit activity in Birch Bay from Whatcom County when this memorandum was written.

conclusion is that either the Transpo Group's estimate of dwelling units in Birch Bay is low or the geography used to define Birch Bay is different between the Census and the current project.

## POPULATION FORECAST

The Transpo Group asked ECO to evaluate their forecast of dwelling units in Blaine and Birch Bay in 2027 (shown in Table 1) based on recent growth trends and the population forecasts presented in the "Whatcom County Population and Economic Forecasts" report. This section discusses the evaluation.

The Transpo Group presented their forecast in terms of housing units, but ECO's 2002 forecast was for population. The first step in evaluating the Transpo Group's forecast of housing units in 2027 was to convert households into population.

Converting households to population has two assumptions and two points for uncertainty: household size and occupancy rate. Household sizes in Blaine and Birch Bay have remained relatively stable over the past ten years, suggesting that it is unlikely that they would vary substantially over the next twenty years.<sup>2</sup>

The stability of occupancy rates is less certain. The factors contributing to the purchase and ownership of second homes are complex and interconnected with trends in the economy at the local through international levels. For example, purchase of homes by Canadians, which is common in the area, varies based on the strength of the Canadian dollar relative to the U.S. dollar. Canadians purchased fewer homes in Birch Bay during the 1990's when the Canadian dollar was weak but have purchased more homes in Birch Bay during the last five years, when the Canadian dollar has been strong relative to the U.S. dollar. This complexity make it is unclear how occupancy rates will change in the planning period.

In 2000, Whatcom County's occupancy rate was about 87%. Blaine's occupancy rate (86%) was similar to the County's average. Birch Bay's occupancy rate (42%) was much lower than the County average. If Birch Bay's occupancy rate became more like the County average over the next twenty years, it could have a significant impact on the forecast of households and population.<sup>3</sup> In the absence of information about future occupancy rates in Birch Bay, ECO has assumed occupancy rates will be the same in the future as they were in the past.

Table 2 shows the results of the conversion of households to population. Based on the Transpo Group's forecast and the assumptions about household size and occupancy, in 2027 Birch Bay would have about 8,170 residents and Blaine would have about 7,160 residents.

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<sup>2</sup> Household sizes have been decreasing nationally over the past several decades, a trend that is likely to continue. However, household size in Birch Bay has remained stable between 1990 to 2000 and household size increased (from 2.34 persons per household) in Blaine during the 1990's.

<sup>3</sup> For example, if Birch Bay's occupancy rate increased to the County average (87%) and if Birch Bay had 8,426 dwellings in 2027, the population would be about 17,000 residents.

**Table 2. Population estimate based on forecast of households,  
Birch Bay and Blaine, 2027**

	2027 Est. DU	2000 HH size	Occupancy	Population Estimate
Birch Bay UGA	8,426	2.33	42%	8,246
Blaine w/UGA	3,351	2.48	86%	7,158

Source: Census, 2000; Transpo Group; calculations by ECONorthwest

The next step in the evaluation was to compare growth over the planning period. Table 3 shows a comparison of forecast population change in Birch Bay and Blaine between 2000 and 2027.<sup>4</sup> Over the twenty-seven year period, Birch Bay is forecast to grow by 3,211 residents at an average annual rate of 1.87%. Over the same period, Blaine is forecast to grow by 3,388 residents at an average annual rate of 2.40%.

**Table 3. Population change, Birch Bay and Blaine, 2000-2027**

	2000 Census	2027 Transpo	Change		
			Number	Percent	AAGR
Birch Bay UGA	4,961	8,172	3,211	65%	1.87%
Blaine w/UGA	3,770	7,158	3,388	90%	2.40%

Source: Census, 2000; Transpo Group; calculations by ECONorthwest

## Blaine

ECO's conclusion is that this forecast is probably reasonable for the Blaine UGA. This conclusion is based on historical population change and recent development activity in Blaine, shown in Table A-1 and A-2 in the Appendix. Between 2000 and 2006, population in the City of Blaine has grown at an average annual rate of 2.92% and has issued permits for 419 residential units. In a previous evaluation of population growth in Blaine, ECO concluded that the City is likely to grow between 3% and 4% annually between 2007 and 2012. The Transpo Group's forecast of growth fits with the "high growth" scenario from ECO's 2002 County population forecast, which projects that Blaine will grow at an average annual rate of 2.19% between 2007 to 2022.

## Birch Bay

The evaluation of the forecast for Birch Bay is more difficult for three reasons: (1) recent development or population estimates are not available for Birch Bay, (2) there is uncertainty about whether Birch Bay will continue to have a low occupancy rate, and (3) there are significant differences between the estimates of the number of dwelling units in Birch Bay in 2005 from WCOG and the Transpo Group.

<sup>4</sup> ECO used the Census estimate of population from 2000 because there is no more recent estimate of population for Birch Bay.

ECO made the following assumptions about Birch Bay: (1) Birch Bay has grown at least as fast as Whatcom County since 2000 (1.67% AAGR)<sup>5</sup>, (2) the occupancy rate will be the same in the future as it has been historically, and (3) the Transpo Group's estimate of dwelling units in Birch Bay in 2005 is accurate.

Based on these assumptions, the Transpo Group's forecast of population growth rate at 1.87% annually for the twenty-two year period is low. Historically, Birch Bay has grown much faster than the County. Between 1990 and 2000, Birch Bay grew at 7.1% annually, compared with the County's 2.7% annual growth rate. Interviews with real estate professionals indicate that the housing market in Birch Bay grew very quickly from 2002 to spring of 2006 and has since slowed but is still active. Based on this information, the best estimate for Birch Bay's growth is the "high growth" scenario from ECO's 2002 County population forecast, which projects that Birch Bay's population will grow at an average annual rate of 2.88% between 2007 to 2022.

In addition, the Transpo Group's forecast for dwelling units is lower than the estimate of the build-out capacity of Birch Bay by 2022 presented in the Birch Bay Community Plan. The Plan estimates that the build-out capacity of the proposed Birch Bay UGA is 3,450 additional housing units by 2022. County planning staff indicate that Birch Bay has grown faster than the expectations presented in the Community Plan. Based on the Transpo Group's estimate of housing in 2005 and forecast for housing, Birch Bay would have capacity for nearly 300 more dwelling units than is forecast for 2027.

In summary, ECO believes that the Transpo Group's base population for Birch Bay is low and the growth rate assumption is low.

## EVALUATION OF EMPLOYMENT FORECAST

Change in employment for a city is generally measured using data from the Quarterly Census of Employment and Workforce (QCEW), confidential data about covered employment.<sup>6</sup> ECO did not have access to QCEW data for Blaine or Birch Bay for this project. The best source of information for recent employment figures available to ECO was covered employment for the entire County.

Between 2001 and 2005, employment in Whatcom County grew from 68,918 to 78,491 jobs, an increase of 9,573 jobs at an average annual rate of 3.31%. The forecasts of employment in the 2002 "Whatcom County Population and Economic Forecasts" report assume that employment in Blaine and Birch Bay will grow at a similar rate as the County. Based on that assumption, it is likely that employment has grown by about 3% annually since 2002.

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<sup>5</sup> It is likely that Birch Bay has grown much faster than the County. Between 1990 and 2000, Birch Bay grew at 7.1% annually, compared with the County's 2.7% annual growth rate.

<sup>6</sup> Covered employment includes only employees who are covered by unemployment insurance, such as sole proprietors. It is unclear whether the estimates of employment from WCOG and the Transpo Group in Table 4 are for covered or total employment. It is likely that these estimates are for covered employment because estimates of total employment are not available from the Bureau of Economic Analysis. Using an estimate of covered employment for transportation planning with an UGA is reasonable because most sole proprietors in Whatcom County are likely to be employed from their home and have comparatively little impact on transportation.



Table 4 shows the Transpo Group's estimate of employment in Blaine and Birch Bay in 2005 and 2027. Again, the Transpo Group's base estimate is lower than WCOG's estimates, by 60 employees in Birch Bay and is 126 employees in Blaine. ECO has no way to evaluate the accuracy of these estimates. It is worth noting that these estimates are higher than the estimates presented in the "Whatcom County Population and Economic Forecasts" report, which projected that Birch Bay had 356 covered employees and Blaine had 1,752 covered employees.

The Transpo Group projected that employment would grow by 436 jobs in Birch Bay between 2005 to 2027, at an average annual rate of 2.83%. In the Blaine UGA, they projected that employment would grow by 1,069 jobs over the twenty-two year period at an average annual rate of 1.44%.

**Table 4. Estimate of employment, Blaine and Birch Bay UGAs, 2005 and 2027**

	2005 WCOG	Transpo Group		Change 2005-2027		
		2005	2027	Number	Percent	AAGR
Birch Bay UGA	574	514	950	436	85%	2.83%
Blaine w/UGA	3,013	2,887	3,956	1,069	37%	1.44%

Source: Transpo Group

## **Blaine**

Based on recent growth and ECO's employment forecast from the 2002 report, presented in Table A-6, our conclusion is that the Transpo Group's forecast for employment in Blaine is probably low. The Transpo Group forecast employment growth of 1.44% annually, which is lower than the "low growth" scenario presented in the 2002 report. We recommend using the baseline forecast for Blaine from the 2002 report, which assumes annual change of 2.44% over the 2007-2022 period.

## **Birch Bay**

Based on recent growth and ECO's employment forecast from the 2002 report, presented in Table A-7, our conclusion is that the Transpo Group's forecast of employment for Birch Bay is reasonable. We recommend using the baseline forecast for Birch Bay from the 2002 report, which assumes annual change of 2.85% over the 2007-2022 period.

## APPENDIX: ADDITIONAL DATA

This appendix presents data that was used in the evaluation of the Transpo Group's forecast for dwelling units and employment in Blaine and Birch Bay.

**Table A-1. Historic population growth, Whatcom County, Blaine, Unincorporated Whatcom County, 1970 to 2006**

<b>Year</b>	<b>Whatcom Co.</b>	<b>Blaine</b>	<b>Unincorp.</b>
1970	81,983	1,955	34,004
1980	106,701	2,363	48,622
1990	127,780	2,489	59,187
2000	166,826	3,770	74,231
2006	184,300	4,480	81,066
<b>AAGR</b>			
1970-2006	2.28%	2.33%	2.44%
1990-2006	2.32%	3.74%	1.99%
2000-2006	1.67%	2.92%	1.48%

Source: Office of Financial Management

**Table A-2. Number and type of residential building permits approved, City of Blaine, 2000 to 2005**

	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>Total</b>
<b>West Blaine</b>							
Single-family dwellings	16	17	22	19	41	30	<b>145</b>
Multifamily dwellings	0	0	0	0	14	16	<b>30</b>
<b>Central Blaine</b>							
Single-family dwellings	9	14	12	19	19	39	<b>112</b>
Multifamily dwellings	18	6	10	13	28	33	<b>108</b>
<b>East Blaine</b>							
Single-family dwellings	0	2	0	1	13	4	<b>20</b>
Multifamily dwellings	0	0	0	0	4	0	<b>4</b>
<b>Total dwelling units</b>	<b>43</b>	<b>39</b>	<b>44</b>	<b>52</b>	<b>119</b>	<b>122</b>	<b>419</b>

Source: City of Blaine

**Table A-3. Population forecast scenarios, Whatcom County, 2002-2022**

Population			
Year	High Growth Scenario	Baseline Scenario	Low Growth Scenario
2002	174,501	173,471	171,066
2007	195,931	187,980	182,901
2012	217,426	202,848	194,248
2017	238,636	217,574	204,916
2022	261,084	231,928	215,850
Average Annual Growth Rates			
2002	-	-	-
2007	2.34%	1.62%	1.35%
2012	2.10%	1.53%	1.21%
2017	1.88%	1.41%	1.08%
2022	1.81%	1.29%	1.05%
Average Annual Net Changes			
2002	-	-	-
2007	4,286	2,902	2,367
2012	4,299	2,974	2,269
2017	4,242	2,945	2,134
2022	4,490	2,871	2,187

Source: Whatcom County Population and Economic Forecasts, ECONorthwest 2002

**Table A-4. Population forecast scenarios, Blaine UGA, 2002-2022**

Year	High growth scenario			Baseline			Low growth scenario		
	Pop.	Change	AAGR	Pop.	Change	AAGR	Pop.	Change	AAGR
2002	5,011	--	--	4,959	--	--	4,886	--	--
2007	5,738	727	2.75%	5,328	369	1.45%	5,136	250	1.00%
2012	6,465	727	2.41%	5,711	383	1.40%	5,364	228	0.87%
2017	7,171	706	2.09%	6,085	374	1.28%	5,565	201	0.74%
2022	7,942	771	2.06%	6,440	355	1.14%	5,775	210	0.74%

Source: Whatcom County Population and Economic Forecasts, ECONorthwest 2002

**Table A-5. Population forecast scenarios, Birch Bay, 2002-2022**

Year	High growth scenario			Baseline			Low growth scenario		
	Pop.	Change	AAGR	Pop.	Change	AAGR	Pop.	Change	AAGR
2002	4,815	--	--	4,721	--	--	4,605	--	--
2007	6,004	1,189	4.51%	5,265	544	2.21%	4,941	336	1.42%
2012	7,193	1,189	3.68%	5,835	570	2.08%	5,242	301	1.19%
2017	8,347	1,154	3.02%	6,391	556	1.84%	5,495	253	0.95%
2022	9,619	1,272	2.88%	6,912	521	1.58%	5,764	269	0.96%

Source: Whatcom County Population and Economic Forecasts, ECONorthwest 2002

**Table A-6. Employment forecast scenarios, Blaine UGA, 2007-2022**

Year	High growth scenario			Baseline			Low growth scenario		
	Pop.	Change	AAGR	Pop.	Change	AAGR	Pop.	Change	AAGR
2007	2,357	--	--	2,262	--	--	2,200	--	--
2012	2,765	408	3.25%	2,580	318	2.67%	2,470	270	2.34%
2017	3,190	425	2.90%	2,909	329	2.43%	2,740	269	2.09%
2022	3,655	465	2.76%	3,247	338	2.22%	3,022	282	1.98%

Source: Whatcom County Population and Economic Forecasts, ECONorthwest 2002

**Table A-7. Employment forecast scenarios, Birch Bay, 2007-2022**

Year	High growth scenario			Baseline			Low growth scenario		
	Pop.	Change	AAGR	Pop.	Change	AAGR	Pop.	Change	AAGR
2007	507	--	--	486	--	--	473	--	--
2012	608	102	3.73%	567	81	3.13%	543	71	2.82%
2017	716	108	3.31%	653	86	2.86%	615	71	2.49%
2022	835	119	3.12%	741	88	2.56%	690	75	2.34%

Source: Whatcom County Population and Economic Forecasts, ECONorthwest 2002

## Appendix B: Final Land Use Tables

## Key to Land Use Tables

Variable	Description	Units
TAZ	Transportation Analysis Zone	ID number
Total HH	Total Households	Households
Un-occ HH	Un-occupied Households	Households
Occ HH	Occupied Households	Households
Total EMP	Total Employment	Employees
EDU_EMP	Educational Employment	Employees
FIRE_EMP	Finance, Insurance and Real Estate Employment	Employees
SERV_EMP	Service Employment	Employees
GOV_EMP	Government Employment	Employees
MAN_EMP	Manufacturing Employment	Employees
RET_EMP	Retail Employment	Employees
WSL_EMP	Wholesale Employment	Employees
TCU_EMP	Transportation, Communications and Utility Employment	Employees
CON_EMP	Construction Employment	Employees
AG_EMP	Agriculture Employment	Employees
OTR_EMP	Other Employment	Employees
MIN_EMP	Mining Employment	Employees

## 2005 Land Use

TAZ	Total HH	Un-occ HH	Occ HH	Total EMP	EDU_EMP	FIRE_EMP	SERV_EMP	GOV_EMP	MAN_EMP	RET_EMP	WSL_EMP	TCU_EMP	CON_EMP	AG_EMP	OTR_EMP	MIN_EMP
213	59	4	55	53	0	0	3	0	0	0	0	0	50	0	0	0
217	95	5	90	7	0	0	0	0	7	0	0	0	0	0	0	0
218	88	4	84	5	0	0	3	0	0	0	0	2	0	0	0	0
219	40	3	37	152	0	0	0	35	0	0	0	68	0	0	49	0
220	5	0	5	246	0	10	78	0	7	20	48	59	0	0	24	0
221	5	0	5	15	0	0	0	15	0	0	0	0	0	0	0	0
222	16	1	15	166	162	0	0	4	0	0	0	0	0	0	0	0
223	187	14	173	30	0	1	17	0	6	3	0	3	0	0	0	0
224	90	10	80	247	0	2	184	4	0	5	0	50	2	0	0	0
225	75	8	67	22	0	0	5	0	0	13	0	4	0	0	0	0
226	1	0	1	127	0	0	17	4	11	11	69	15	0	0	0	0
227	25	3	22	658	13	66	172	202	28	59	38	31	5	0	22	22
228	297	35	262	69	0	8	43	0	4	8	0	0	2	0	4	0
229	114	13	101	18	0	0	11	0	1	3	0	0	0	0	3	0
230	65	8	57	146	0	0	6	0	0	10	6	0	0	0	124	0
302	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
303	1	0	1	574	55	0	0	101	230	23	31	93	25	0	16	0
304	75	5	70	10	0	2	0	0	5	0	3	0	0	0	0	0
305	63	5	58	88	0	0	0	0	0	72	0	16	0	0	0	0
327	19	1	18	7	0	0	0	0	0	2	0	2	3	0	0	0
500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
501	0	0	0	800	0	0	0	0	800	0	0	0	0	0	0	0
502	0	0	0	10	0	0	0	0	5	0	5	0	0	0	0	0
503	2	1	1	16	0	0	16	0	0	0	0	0	0	0	0	0
504	375	169	206	16	0	0	16	0	0	0	0	0	0	0	0	0
505	2	1	1	4	0	0	4	0	0	0	0	0	0	0	0	0
506	7	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0
507	35	16	19	0	0	0	0	0	0	0	0	0	0	0	0	0
508	209	94	115	0	0	0	0	0	0	0	0	0	0	0	0	0
509	107	48	59	0	0	0	0	0	0	0	0	0	0	0	0	0
510	185	83	102	0	0	0	0	0	0	0	0	0	0	0	0	0
511	180	148	32	28	0	0	25	0	0	0	0	0	0	0	3	0
512	8	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0
513	5	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0
514	2	1	1	12	0	0	5	0	0	0	0	0	0	0	7	0
515	2	1	1	3	0	0	0	0	0	0	0	3	0	0	0	0
516	6	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
517	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
518	40	18	22	3	0	0	3	0	0	0	0	0	0	0	0	0
519	22	18	4	9	0	2	7	0	0	0	0	0	0	0	0	0
520	65	53	12	5	0	1	4	0	0	0	0	0	0	0	0	0
521	700	574	126	33	0	2	31	0	0	0	0	0	0	0	0	0
522	20	4	16	3	0	0	3	0	0	0	0	0	0	0	0	0
523	38	7	31	3	0	0	1	0	0	0	0	0	0	0	2	0
524	65	29	36	3	0	0	0	0	0	3	0	0	0	0	0	0
525	1	0	1	16	0	0	2	0	0	7	0	6	1	0	0	0
526	30	13	17	13	0	0	12	0	0	0	0	1	0	0	0	0
527	30	13	17	13	0	0	10	0	0	0	1	2	0	0	0	0
528	3	0	3	19	0	0	9	0	0	5	0	3	1	0	1	0
529	28	1	27	1	0	0	0	0	0	0	0	1	0	0	0	0
530	40	7	33	1	0	0	0	0	0	0	0	0	0	0	1	0
531	19	1	18	63	0	0	6	0	57	0	0	0	0	0	0	0
532	9	0	9	7	0	0	4	0	0	2	0	0	0	0	1	0
533	13	1	12	7	0	0	3	0	2	1	0	0	0	0	1	0
534	22	1	21	63	0	0	0	0	60	0	0	0	3	0	0	0
535	23	4	19	18	0	0	10	0	0	2	0	1	5	0	0	0
536	13	2	11	9	0	0	4	0	0	3	0	0	2	0	0	0
537	5	1	4	4	0	0	2	0	0	2	0	0	0	0	0	0
538	4	1	3	34	0	0	7	0	0	2	20	5	0	0	0	0
539	9	2	7	4	0	0	3	0	0	0	0	1	0	0	0	0
540	54	10	44	35	0	0	18	0	0	2	13	2	0	0	0	0
541	31	1	30	0	0	0	0	0	0	0	0	0	0	0	0	0
542	6	1	5	71	0	0	4	7	0	41	13	0	5	0	1	0
543	20	4	16	29	0	0	4	0	0	25	0	0	0	0	0	0
544	10	2	8	13	0	0	5	0	0	5	0	0	3	0	0	0
545	20	10	10	4	0	0	4	0	0	0	0	0	0	0	0	0
546	150	74	76	36	0	1	25	0	3	0	0	7	0	0	0	0
547	90	44	46	0	0	0	0	0	0	0	0	0	0	0	0	0
548	30	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0
549	15	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0
550	32	16	16	0	0	0	0	0	0	0	0	0	0	0	0	0
551	77	63	14	1	0	0	1	0	0	0	0	0	0	0	0	0
552	1	1	0	14	0	2	12	0	0	0	0	0	0	0	0	0
553	90	44	46	2	0	0	2	0	0	0	0	0	0	0	0	0
554	0	0	0	37	0	0	20	0	2	7	0	1	0	0	7	0
555	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
556	1	0	1	37	0	3	27	0	5	0	0	0	0	0	2	0
557	240	118	122	92	0	7	85	0	0	0	0	0	0	0	0	0
558	90	29	61	61	0	7	44	0	1	9	0	0	0	0	0	0
559	2	1	1	11	0	0	8	3	0	0	0	0	0	0	0	0
560	2	1	1	90	0	4	64	0	0	3	5	14	0	0	0	0
561	30	15	15	5	0	0	5	0	0	0	0	0	0	0	0	0
562	11	3	8	9	0	0	3	0	2	0	1	0	1	0	2	0
563	11	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0
564	54	17	37	0	0	0	0	0	0	0	0	0	0	0	0	0
565	11	3	8	1	0	0	1	0	0	0	0	0	0	0	0	0
566	43	14	29	0	0	0	0	0	0	0	0	0	0	0	0	0
567	75	24	51	0	0	0	0	0	0	0	0	0	0	0	0	0
568	11	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0
569	6	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0
570	80	25	55	0	0	0	0	0	0	0	0	0	0	0	0	0
571	20	6	14	4	0	0	0	0	2	0	0	0	0	0	2	0
572	209	66	143	42	0	11	7	10	4	0	1	1	8	0	0	0
573	209	66	143	7	0	2	4	0	0	0	0	0	0	0	1	0
574	278	88	190	0	0	0	0	0	0	0	0	0	0	0	0	0
575	13	4	9	3	0	0	0	0	0	2	1	0	0	0	0	0

2005 Land Use

576	105	33	72	0	0	0	0	0	0	0	0	0	0	0	0	0	0
577	4	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
578	9	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
579	0	0	0	37	0	10	6	0	0	1	0	20	0	0	0	0	0
580	6	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
581	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
582	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
583	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
584	30	15	15	2	0	0	2	0	0	0	0	0	0	0	0	0	0
585	10	3	7	1	0	0	0	0	0	0	0	0	0	0	1	0	0
586	10	3	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
587	5	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
588	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
589	150	14	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0
590	50	5	45	2	0	0	2	0	0	0	0	0	0	0	0	0	0
591	10	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
592	14	1	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
593	6	1	5	19	0	0	0	0	0	0	0	19	0	0	0	0	0
594	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
595	45	2	43	10	0	0	1	0	1	0	0	4	0	0	4	0	0
596	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
597	35	2	33	7	0	0	7	0	0	0	0	0	0	0	0	0	0
598	12	1	11	26	0	0	16	0	0	0	0	6	4	0	0	0	0
599	10	4	6	28	0	0	13	0	0	15	0	0	0	0	0	0	0
600	18	8	10	28	0	0	11	0	0	15	0	2	0	0	0	0	0
601	5	0	5	6	0	0	0	0	0	0	0	0	6	0	0	0	0
602	41	2	39	47	35	0	11	0	0	0	0	1	0	0	0	0	0
603	5	0	5	53	0	0	10	0	31	0	0	0	12	0	0	0	0
604	16	1	15	6	0	0	6	0	0	0	0	0	0	0	0	0	0
605	204	10	194	6	6	0	0	0	0	0	0	0	0	0	0	0	0
606	67	30	37	3	0	0	0	0	0	3	0	0	0	0	0	0	0
607	120	38	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0
608	82	4	78	0	0	0	0	0	0	0	0	0	0	0	0	0	0
609	77	63	14	1	0	0	0	1	0	0	0	0	0	0	0	0	0
610	77	63	14	1	0	0	1	0	0	0	0	0	0	0	0	0	0
611	0	0	0	19	0	0	0	0	18	0	1	0	0	0	0	0	0
612	0	0	0	6	0	0	0	0	6	0	0	0	0	0	0	0	0
613	0	0	0	20	0	0	0	0	10	0	10	0	0	0	0	0	0
614	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
615	50	9	41	15	0	0	9	0	3	0	0	3	0	0	0	0	0

Total	6,955	2,555	4,400	4,806	271	141	1,164	386	1,311	384	266	446	138	0	278	22	
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## 2027 Land Use

TAZ	Total HH	Un-occ HH	Occ HH	Total EMP	EDU_EMP	FIRE_EMP	SERV_EMP	GOV_EMP	MAN_EMP	RET_EMP	WSL_EMP	TCU_EMP	CON_EMP	AG_EMP	OTR_EMP	MIN_EMP
213	587	4	583	106	0	0	10	0	0	15	5	0	75	1	0	0
217	134	5	129	107	0	0	10	0	7	40	10	20	0	0	20	0
218	149	4	145	52	25	0	10	0	0	10	0	2	0	0	5	0
219	46	3	43	237	5	0	26	35	0	36	0	86	0	0	49	0
220	7	0	7	433	0	13	125	0	7	100	75	74	2	2	35	0
221	11	0	11	81	0	0	10	15	0	7	25	12	10	2	0	0
222	21	1	20	229	191	0	15	9	0	11	0	3	0	0	0	0
223	212	14	198	53	7	1	27	0	6	6	0	4	2	0	0	0
224	109	10	99	424	0	3	276	41	0	24	0	67	13	0	0	0
225	93	8	85	29	1	0	8	0	0	16	0	4	0	0	0	0
226	1	0	1	177	0	0	32	4	11	31	73	18	8	0	0	0
227	33	3	30	820	25	100	210	215	35	100	50	32	9	0	22	22
228	340	35	305	183	2	23	104	0	4	31	1	5	6	2	5	0
229	129	13	116	60	0	0	29	0	1	20	0	0	0	0	10	0
230	89	8	81	341	0	15	75	0	0	65	10	0	0	1	175	0
302	0	0	0	6	0	0	2	0	0	2	1	0	1	0	0	0
303	2	0	2	691	76	1	43	121	240	35	31	100	26	1	17	0
304	87	5	82	79	0	3	45	11	5	6	3	5	1	0	0	0
305	67	5	62	142	0	0	13	15	0	85	10	19	0	0	0	0
327	546	1	545	35	0	0	6	0	0	13	0	7	9	0	0	0
500	44	0	44	27	0	0	2	0	24	0	0	0	0	0	1	0
501	0	0	0	900	0	0	0	0	900	0	0	0	0	0	0	0
502	2	0	2	28	0	0	0	0	22	0	5	1	0	0	0	0
503	40	1	39	33	0	0	33	0	0	0	0	0	0	0	0	0
504	375	169	206	35	0	2	29	0	0	4	0	0	0	0	0	0
505	80	1	79	7	0	0	7	0	0	0	0	0	0	0	0	0
506	9	3	6	1	0	0	1	0	0	0	0	0	0	0	0	0
507	402	16	386	0	0	0	0	0	0	0	0	0	0	0	0	0
508	282	94	188	0	0	0	0	0	0	0	0	0	0	0	0	0
509	241	48	193	0	0	0	0	0	0	0	0	0	0	0	0	0
510	282	83	199	5	0	0	3	0	0	2	0	0	0	0	0	0
511	180	148	32	38	0	0	29	0	0	5	0	1	0	0	3	0
512	59	4	55	0	0	0	0	0	0	0	0	0	0	0	0	0
513	19	2	17	0	0	0	0	0	0	0	0	0	0	0	0	0
514	230	1	229	59	0	1	36	1	0	14	0	0	0	0	7	0
515	197	1	196	36	0	0	23	0	0	0	0	8	0	0	5	0
516	48	3	45	0	0	0	0	0	0	0	0	0	0	0	0	0
517	97	2	95	0	0	0	0	0	0	0	0	0	0	0	0	0
518	627	18	609	7	0	0	5	0	0	0	0	0	0	0	2	0
519	80	18	62	16	0	3	10	0	0	3	0	0	0	0	0	0
520	127	53	74	8	0	1	7	0	0	0	0	0	0	0	0	0
521	700	574	126	53	0	3	46	1	0	3	0	0	0	0	0	0
522	80	4	76	44	0	0	27	0	5	6	0	3	1	0	2	0
523	38	7	31	6	0	0	4	0	0	0	0	0	0	0	2	0
524	68	29	39	5	0	0	2	0	0	3	0	0	0	0	0	0
525	2	0	2	27	0	0	7	0	0	11	0	6	3	0	0	0
526	34	13	21	37	0	0	17	0	0	5	1	2	12	0	0	0
527	30	13	17	37	1	0	17	0	0	4	1	3	10	1	0	0
528	3	0	3	26	0	0	11	0	0	5	0	3	6	0	1	0
529	28	1	27	3	0	0	0	0	0	0	0	1	1	0	1	0
530	40	7	33	3	0	0	0	0	0	0	0	0	0	2	1	0
531	25	1	24	75	0	0	6	0	60	6	0	1	2	0	0	0
532	14	0	14	9	0	0	4	0	0	3	0	0	0	0	2	0
533	13	1	12	10	0	0	3	0	2	4	0	0	0	0	1	0
534	26	1	25	75	0	0	1	0	60	4	1	4	5	0	0	0
535	30	4	26	33	0	0	18	0	0	4	0	1	10	0	0	0
536	16	2	14	24	0	0	17	0	0	4	0	0	3	0	0	0
537	5	1	4	7	0	0	2	0	0	5	0	0	0	0	0	0
538	4	1	3	49	0	0	19	0	0	4	20	6	0	0	0	0
539	9	2	7	8	0	0	3	0	0	2	2	1	0	0	0	0
540	64	10	54	80	0	0	53	0	0	5	14	2	1	1	4	0
541	31	1	30	24	0	0	3	2	0	8	3	1	6	0	1	0
542	6	1	5	77	0	0	4	7	0	46	13	0	6	0	1	0
543	41	4	37	60	0	0	6	0	0	53	0	0	1	0	0	0
544	27	2	25	24	0	0	8	0	0	9	0	0	7	0	0	0
545	185	10	175	22	0	0	14	0	0	7	0	1	0	0	0	0
546	201	74	127	67	0	3	46	0	3	6	0	7	2	0	0	0
547	111	44	67	0	0	0	0	0	0	0	0	0	0	0	0	0
548	161	15	146	0	0	0	0	0	0	0	0	0	0	0	0	0
549	76	7	69	0	0	0	0	0	0	0	0	0	0	0	0	0
550	139	16	123	0	0	0	0	0	0	0	0	0	0	0	0	0
551	97	63	34	5	0	0	4	1	0	0	0	0	0	0	0	0
552	28	1	27	82	0	7	62	0	3	10	0	0	0	0	0	0
553	464	44	420	3	0	0	3	0	0	0	0	0	0	0	0	0
554	19	0	19	73	0	0	37	1	6	18	0	2	2	0	7	0
555	142	0	142	9	0	0	9	0	0	0	0	0	0	0	0	0
556	66	0	66	72	0	4	49	0	5	8	0	0	0	0	6	0
557	240	118	122	101	0	9	91	0	0	1	0	0	0	0	0	0
558	154	29	125	67	0	9	47	0	1	10	0	0	0	0	0	0
559	68	1	67	16	0	2	8	3	0	2	0	1	0	0	0	0
560	16	1	15	99	0	4	73	0	0	3	5	14	0	0	0	0
561	44	15	29	7	0	0	5	0	0	0	0	2	0	0	0	0
562	82	3	79	75	0	3	65	1	2	0	1	0	1	0	2	0
563	87	3	84	0	0	0	0	0	0	0	0	0	0	0	0	0
564	109	17	92	0	0	0	0	0	0	0	0	0	0	0	0	0
565	123	3	120	17	0	0	17	0	0	0	0	0	0	0	0	0
566	103	14	89	0	0	0	0	0	0	0	0	0	0	0	0	0
567	100	24	76	0	0	0	0	0	0	0	0	0	0	0	0	0
568	123	3	120	0	0	0	0	0	0	0	0	0	0	0	0	0
569	21	2	19	0	0	0	0	0	0	0	0	0	0	0	0	0
570	125	25	100	0	0	0	0	0	0	0	0	0	0	0	0	0
571	98	6	92	5	0	1	0	0	2	0	0	0	0	0	2	0
572	209	66	143	42	0	11	7	10	4	0	1	1	8	0	0	0
573	209	66	143	7	0	2	4	0	0	0	0	0	0	0	1	0
574	278	88	190	0	0	0	0	0	0	0	0	0	0	0	0	0
575	693	4	689	49	0	0	35	0	0	10	4	0	0	0	0	0

2027 Land Use

576	155	33	122	42	0	2	40	0	0	0	0	0	0	0	0	0
577	675	1	674	47	0	0	43	0	0	0	0	0	0	4	0	0
578	685	3	682	47	0	0	47	0	0	0	0	0	0	0	0	0
579	86	0	86	92	0	11	60	0	0	1	0	20	0	0	0	0
580	38	3	35	0	0	0	0	0	0	0	0	0	0	0	0	0
581	22	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0
582	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
583	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
584	46	15	31	15	0	0	10	0	0	2	0	1	2	0	0	0
585	33	3	30	44	0	1	40	0	0	0	0	0	2	0	1	0
586	10	3	7	0	0	0	0	0	0	0	0	0	0	0	0	0
587	31	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0
588	19	1	18	0	0	0	0	0	0	0	0	0	0	0	0	0
589	150	14	136	0	0	0	0	0	0	0	0	0	0	0	0	0
590	121	5	116	4	0	0	2	0	0	0	0	2	0	0	0	0
591	10	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0
592	14	1	13	0	0	0	0	0	0	0	0	0	0	0	0	0
593	6	1	5	32	0	0	8	0	0	0	5	19	0	0	0	0
594	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
595	45	2	43	45	1	0	7	0	1	7	0	6	18	1	4	0
596	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
597	35	2	33	15	1	0	7	0	0	5	0	0	2	0	0	0
598	12	1	11	49	0	0	24	0	0	0	0	8	16	1	0	0
599	13	4	9	34	0	0	15	0	0	16	0	0	3	0	0	0
600	25	8	17	36	0	0	15	0	0	16	0	2	3	0	0	0
601	5	0	5	7	0	0	0	0	0	0	0	0	7	0	0	0
602	41	2	39	57	37	0	15	0	0	2	0	1	2	0	0	0
603	5	0	5	66	0	0	10	0	31	0	0	0	25	0	0	0
604	16	1	15	7	0	0	7	0	0	0	0	0	0	0	0	0
605	204	10	194	9	6	0	3	0	0	0	0	0	0	0	0	0
606	86	30	56	6	0	0	2	0	0	3	0	1	0	0	0	0
607	120	38	82	0	0	0	0	0	0	0	0	0	0	0	0	0
608	82	4	78	0	0	0	0	0	0	0	0	0	0	0	0	0
609	77	63	14	1	0	0	0	1	0	0	0	0	0	0	0	0
610	77	63	14	1	0	0	1	0	0	0	0	0	0	0	0	0
611	2	0	2	19	0	0	0	0	18	0	1	0	0	0	0	0
612	0	0	0	6	0	0	0	0	6	0	0	0	0	0	0	0
613	0	0	0	20	0	0	0	0	10	0	10	0	0	0	0	0
614	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
615	78	9	69	15	0	0	9	0	3	0	0	3	0	0	0	0

Total	15,024	2,555	12,469	7,815	378	238	2,480	494	1,484	1,002	381	593	329	19	395	22
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