

## 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 (MHHT) 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

## SHORELINES AND SHORELANDS

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

## SHORELINES AND SHORELANDS

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:

## SHORELINES AND SHORELANDS

- 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.

## SHORELINES AND SHORELANDS

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

## SHORELINES AND SHORELANDS

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:

## SHORELINES AND SHORELANDS

- 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

## SHORELINES AND SHORELANDS

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.

## SHORELINES AND SHORELANDS

- 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**