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**Chapter 20.50**  
**BIRCH BAY WATERSHED LOW IMPACT DEVELOPMENT OVERLAY**

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**20.50.010 Purpose.**

The Birch Bay Low Impact Development (LID) Standards are intended to conserve and use existing natural site features, to integrate distributed, small-scale stormwater controls, and to prevent measurable harm to streams, lakes, wetlands, and other natural aquatic systems from commercial or residential development sites. The purpose of this section is to establish a scoring system for low impact developments in the Birch Bay and Terrell Creek watershed. While enrollment in this program is not required, all project applicants are encouraged to use LID techniques in their projects. Projects that develop according to the guidelines of the Birch Bay Watershed LID Manual (Res 2011-XX) are eligible for certain benefits. This chapter is intended to fulfill the following purposes:

- (1) Manage stormwater through a land development strategy that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic conditions.
- (2) Encourage creative and coordinated site planning, the conservation of natural conditions and wildlife corridors, the use of appropriate new technologies and techniques, and the efficient layout of streets, utility networks, and other public improvements.
- (3) Minimize impervious surfaces.
- (4) Encourage the creation or preservation of permanent forested space and native vegetation.
- (5) Promote innovative site and housing design.
- (6) Provide standards for development practices that will earn credits toward incentives.
- (7) Provide incentives for project proponents whose project exceeds the standards of existing development regulations.
- (8) Implement a scoring system that provides flexibility in methods used to achieve the stated purpose rather than use a prescriptive approach.
- (9) Further the goals and the implementation of the policies of the Birch Bay Community Plan, Birch Bay Stormwater Plan, and the Whatcom County Comprehensive Plan.

**20.50.030 Area and applicability.**

- (1) The LID credit program applies to development proposals in the unincorporated areas of the Birch Bay watershed (Res. 2008-049 § 1 (Exh. A § 2)).
- (2) These optional standards apply to development applying for benefits in 20.50.110.
- (3) The benefits are available to residential and commercial development, as well as short and long plats.
- (4) If the provisions of this chapter conflict with the provisions of the Shoreline Management Program, then the Shoreline Management Program shall apply.

**20.50.040 Conformance.**

The provisions of this chapter overlay other permit and approval requirements of the Whatcom County Code. All use and development shall conform to all relevant requirements and standards of:

- (1) Whatcom County Code, Title 20, Zoning, except as modified by this chapter;
- (2) The International Building and Fire Codes;
- (3) Whatcom County Critical Area Ordinance 16.16;
- (4) Flood Damage Prevention, Title 17
- (5) Subdivision, Title 21, except as modified by this chapter;
- (6) Whatcom County Development Standards - Stormwater, Chapter 2, except as modified by this chapter;
- (7) Whatcom County Development Standards, Stormwater Special Districts, Chapter 2-Section 221, except as modified by this chapter;
- (8) 20.80.735 Water resource special management areas;
- (9) Whatcom County Code, Title 23, Shoreline Management Program;
- (10) Whatcom County Code, Title 24 Health Code; and
- (11) All other applicable official controls.

**20.50.100 Low Impact Development Designation.**

Where a low impact development (LID) approach to stormwater management is required by code, or where incentives are provided to encourage its use, the following shall be the minimum thresholds used to identify a low impact development:

- (1) A development project must achieve 55 points, out of a hundred possible points, through any combination of development practices described in this chapter; and
- (2) Use LID practices to provide for water quality treatment of a 24 hour storm with a six month return frequency, or 91% of annual stormwater runoff volume as indicated in WCC 20.50.700.

**20.50.110 Applicant Benefits.**

By implementing LID techniques, users of this chapter can earn several benefits, based on a sliding point scale.

- (1) Free LID screening meeting. Planning and Development Services will provide a free screening meeting for those interested in pursuing LID credits. An LID specialist from staff will help evaluate whether this program makes sense for the project and describe how the process works. If an applicant decides to pursue a Low Impact Development project, the benefits of WCC 20.50.110(2) are intended to create incentives.
- (2) LID Benefit and Credit Scores

Benefit	Minimum LID Points Required
<b>Use of Birch Bay Habitat Mitigation Fund</b>	30
<b>Dedicated Planning Department Point-of-Contact</b>	40
<b>Flexibility in lot size, setbacks, and height requirements</b>	55
<b>Reduction in Critical Area Buffer Size</b>	55

(a) Use of Birch Bay Habitat Mitigation Fund. Whatcom County code requires mitigation for wetland buffer and Habitat Conservation Area buffer impacts. This mitigation is typically performed on the site where the development impacts occur, and the applicant is required to post a performance bond, and construct, monitor, and maintain the mitigation project for several years. Projects that qualify per WCC 20.50.110(2) and do not have suitable mitigation on-site per WCC 16.16.900, shall be able to avoid these obligations by paying into a fund, which fund sponsors would use to implement mitigation at priority restoration sites in the watershed. By scoring points through this LID program and meeting the minimum stormwater prerequisite, and thus mitigating the water quality and hydrology impacts onsite, an applicant can participate in this off-site habitat mitigation program.

(b) Dedicated Planning Department Point-of-Contact. Projects that qualify per WCC 20.50.110(2) would be assigned a dedicated Whatcom County staff member to coordinate the permitting of the development project. The staff member will be available to assist the applicant through the permit review process.

(c) Flexibility in Lot Size, Setbacks, and Height Requirements. Developments that qualify per WCC 20.50.110(2) can deviate from standard code provisions according to section WCC 20.50.240 in order to achieve the stated purposes of this chapter.

(d) Reduction in Critical Area Buffer Size. Projects that are designated LID in WCC 20.50.100 are eligible for wetland buffer and Habitat Conservation Area buffer reductions

and averaging consistent with Critical Area provisions in WCC 16.16, without the need for additional mitigation.

### **20.50.120 Review Process**

Authorizations required under this chapter overlay other permit and approval requirements of the Whatcom County Code. Low Impact Development pursuant to this chapter shall be conducted as part of the underlying permit or approval. All review must comply with the procedural requirements of Chapter [2.33](#) WCC. The following outlines the major steps that users of this chapter must follow to receive the benefits in section WCC 20.50.110.

- (1) LID Screening and technical assistance meeting:
  - (a) Applicant has option to receive a free consulting meeting with a county LID specialist. This is a chance to discuss conceptual plans, describe how LID scoring and benefits work, whether the program is appropriate for the intended project, and discuss LID techniques that may be most suitable on the project site.
- (2) If a pre-application meeting is required pursuant to WCC 2.33, such as subdivision, short subdivision, and commercial applicants:
  - (a) Applicant indicates to county staff which benefit level they hope to achieve and which LID techniques they plan to use. County staff prepare findings.
  - (b) Applicant submits documentation as described in WCC 20.50.140 initiating the formal pre-certification review process.
  - (c) County staff review pre-certification submittals and determine if the project is in compliance with this chapter. County staff issue a pre-certification letter that indicates the number of points and the corresponding benefit the project is likely to achieve. If the benefit level is not at the level the applicant had hoped to achieve, no more than one additional round of resubmittal and review may occur at this stage without additional fees.
- (3) Permits exempt from preapplication review per 2.33.020 shall re-certification letter, without pre-application meeting:
  - (a) As part of construction permit submittals, such as clearing, or building permit, applicant submits documentation as required under section 20.50.140, initiating the formal pre-certification review process.
  - (b) County staff review pre-certification submittals and determine if the project is in compliance with this chapter. County staff issue a pre-certification letter that indicates the number of points and the corresponding benefit the project is likely to achieve. If the benefit level is not at the level the applicant had hoped to achieve, no more than one additional round of resubmittal and review may occur at this stage without additional fees.
- (4) Once a pre-certification letter is sent to the applicant, the applicant will begin receiving the applicable benefit(s).
- (5) Modifications to the LID plan. Requests for modifications of preliminary or final development plans shall be made in writing and shall be submitted to the planning department.
  - (a) Modifications shall be deemed minor if the proposal remains consistent with the purpose and design criteria of this chapter and does not change the overall score of the project and any of the following:
    - (i) Land use;
    - (i) Density, number of dwelling units or lots;

- (ii) The amount of parking;
- (iii) The elimination of LID practices to treat stormwater.

(b) Examples of minor modifications include but are not limited to lot line adjustments associated with a subdivision, minor relocations of buildings or landscaped areas, minor changes in phasing and timing, minor changes in building design, and minor changes in elevations of buildings. Other modifications may be deemed minor if approved by the technical administrator.

(c) Major modifications are those which, as determined by Planning and Development Services, substantially change the basic design, density, open space or other similar requirements or provisions. Major adjustments to the development plans shall be reviewed under the same process as the original approval.

(6) A final certification letter will be issued once the final inspection is approved if the applicant has successfully used the Birch Bay LID manual. A Certificate of Occupancy (CO) is issued.

### **20.50.130 Protective Measures**

(1) To ensure that the open space is preserved and maintained in perpetuity and that LID techniques provide durable benefits to the watershed, areas for which credits are awarded must be protected using one of the following mechanisms:

(a) Notice on Title. The owner of the LID project for which a development permit is about to be issued shall record a notice with the county auditor real estate records in a format approved by the technical administrator and provide a copy of the filed notice to the planning and development services department at the time the permit is issued. The notice shall state the general LID practices employed on the property for which credit is given, and the fact that limitations on further development of the property may exist. See subsections in this chapter for specific requirements; or

(b) Placement in a separate non-building tract owned in common by all lots within a subdivision. The subdivision must include Covenants, Conditions and Restrictions that establish the same limitations on actions as described above under notice on title; or

(c) Placement in a conservation easement or parcel, dedicated to the county or a public or private land trust organization.

(2) Conservation easements and non-building tracts provide the highest level of open space protection; therefore, an applicant is eligible to receive bonus LID credits for this preservation option. See specific details in the following sections of this chapter.

(3) A consolidated site plan that documents and displays all protective measures of a LID project, consistent with 20.50.140, can be substituted for multiple individual covenants with approval of the technical administrator.

### **20.50.140 Site plan and Supporting Text.**

At the screening LID meeting, applicants should bring a conceptual site plan and any supporting graphics, and maps to show existing conditions and an overview of the proposed LID project. For precertification, the site plan and supporting text in combination shall provide a level of detail appropriate to the scale of the project and sufficient to demonstrate how the project complies with the

provisions of this chapter. Specific requirements shall be consistent with existing permit requirements, the Birch Bay LID Manual, and at a minimum shall contain:

- (1) Proposed name of the development, north point, a common engineering scale, date and address, and telephone number of the preparer of the site plan/supporting maps.
- (2) Protected Open Space areas.
- (3) Critical Areas and their buffers.
- (4) Tree and Forest Retention Areas.
- (5) Area of canopy removal.
- (6) Revegetation Areas.
- (7) Driveway, parking area, building footprints, and other impervious areas.
- (8) For Subdivisions: Roads, parking areas, sidewalks and other in-common pervious and impervious developed areas. Stormwater facilities and infrastructure.
- (9) Areas of disturbed soils to be amended.
- (10) Textual information of the proposed LID project including:
  - (a) Project narrative showing how the project fulfills the overall goals and each purpose statement in WCC 20.50.010;
  - (b) Total gross area of the site;
  - (c) Total project area (total gross site area minus open space/reserve area);
  - (d) Total area of designated development area;
  - (e) Total area of tree and forest cover retention area;
  - (f) Total area of revegetation area;
  - (g) Total units proposed;
  - (h) Proposed number of dwelling units by type;
  - (i) Maximum impervious surface proposed for each lot;
  - (j) Lot sizes and dimensions;
  - (k) Total area of impervious surfacing;
  - (l) Proposed ownership of land areas within the LID project both during and after construction;
  - (m) Requested dimensional modifications to standard code requirements;
  - (n) Development schedule indicating the approximate date when construction of the LID project or stages of the LID project can be expected to begin and be completed.
  - (o) Copy of all existing deeds, restrictive covenants, or other legal restrictions which apply to the project site. The applicant may submit a copy of any proposed restrictive covenants that have been drafted.

**20.50.200 Open space.**

**20.50.210 Percentage of Property Set Aside as a Permanent Open Space.**

<b>Within UGA</b>	< 10 %	10 – 20 %	> 20 %	Conservation Easement or Non-Building Tract
<b>Outside of UGA</b>	< 50 %	50 – 65 %	> 65 %	
<b>Points Received</b>	0 points	6 points	12 points	+ 4 points <sup>1</sup>
1) A reserve tract that can later be subdivided shall not receive the bonus conservation credit.				

**20.50.220 Scoring Criteria.**

- (1) Point Criteria for open space credit shall be as follows:
  - (a) The “reserve tract” of a plat subject to the Agricultural Protection Overlay consistent with WCC 20.38, with an approved farm conservation plan, WCC 16.16.290; or
  - (b) The area recorded in a Protective Native Growth Area covenant, according to WCDS Chapter 2, section 221; or
  - (c) Critical Areas and buffers protected in accordance with WCC 16.16.265; or
  - (d) Conservation easement consistent with WCC 20.50.130(1)(c)

**20.50.240 Design Standards.**

The creation of new cluster building lots shall be subject to the design standards of the existing zoning district, subject to the following exceptions:

- (1) Lot size. Design objective: Minimize area of site disturbance. The minimum lot size of the underlying zone district may be reduced up to 15% to achieve the purposes in WCC 20.50.010.
- (2) Lot width. Design objective: Minimize street length. The minimum lot width of the underlying zone district may be reduced to achieve the purposes in the section.
- (3) Setbacks shall be as follows: Class I and Class II roads shall have a minimum setback of 30 feet; and Class III, IV and V roads shall have a minimum setback of 20 feet; provided, that the road right-of-way meets the minimum standard for road rights-of-way pursuant to the Whatcom County Development Standards.
- (4) Zero lot line side yard setbacks may be approved by the zoning administrator for single-family attached dwelling units along the common property line where the dwellings share a common wall when it is demonstrated:
  - (a) That compensating design and/or structural measures are used to ensure the protection of the users and inhabitants (of the development) health, safety and welfare, including but not necessarily limited to visual and acoustical privacy, and adequate light and air.
- (5) Roof overhangs: or other overhanging architectural features shall not project further than 18 inches into the side or rear yard setbacks. Such overhangs may extend three feet into the front yard setback; however, in no case shall they extend more than one-half the depth of the front yard setback.
- (6) An additional 10 feet in building height above the maximum allowed by zone in chapter 30.23 SCC, provided that:
  - (a) The ratio of lot area to floor area does not exceed 2:1; or
  - (b) the project is not within shoreline jurisdiction.
- (7) Does not allow a gross dwelling unit density greater than what would otherwise be allowed or required under existing county regulations.

**20.50.300 Protection of Wetlands, Streams, and Buffers.**

The following outlines the scoring criteria for the Protection of Wetlands, Streams and Buffers LID technique. The LID point score is based upon the type of impact and the existing condition of the wetland, stream, and/or buffer that will be impacted.

- 10 Points	<ul style="list-style-type: none"> <li>Project alters Category II wetlands and/or their forested buffer (if present) ; AND/OR</li> <li>Project alters Terrell Creek or another fish-bearing stream and/or its forested buffer (if present).</li> </ul>
- 4 Points	<ul style="list-style-type: none"> <li>Project alters Category III or IV wetlands; AND/OR</li> <li>Project alters non-fish bearing streams.</li> </ul>
- 2 Points	<ul style="list-style-type: none"> <li>Project alters Category II wetland non-forested buffer; AND/OR</li> <li>Project alters Category III or IV wetland buffer; AND/OR</li> <li>Project alters Terrell Creek or another fish-bearing stream non-forested buffer; AND/OR</li> <li>Project alters a non-fish bearing stream buffer.</li> <li>Project reduces or averages buffer per WCC 16.16</li> </ul>
10 Points	<ul style="list-style-type: none"> <li>The project will not alter wetlands, streams, buffers, or has an approved farm plan per WCC 16.16.290 (these points also apply if the project site does not contain wetlands, streams, or buffers).</li> </ul>

**20.50.320 Scoring Criteria.**

- (1) Credits in this section are available to projects that do not impact the following Critical Areas:
  - (a) Habitat Conservation Areas or their buffers, WCC 16.16.700;
  - (b) Wetlands or their buffers WCC 16.16.600; or
  - (c) Projects that have an approved farm conservation plan consistent with 16.16.290.
- (2) Protective measures shall be according to 16.16.265.

**20.50.400 Tree and Forest Retention Area.**

**20.50.410 Percentage of Existing Forest Cover to be Preserved on the Property.**

<b>Within UGA</b>	< 10 %	10 – 20 %	> 20 %	Conservation Easement or Non-Building Tract
<b>Outside of UGA</b>	< 35 %	35 – 65 %	> 65 %	

  

<b>Points Received</b>	0 points	5 points	10 points	+ 4 points
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**20.50.420 Scoring Criteria.**

Vegetation comprised of plant species, other than noxious weeds, that are indigenous to the coastal region of the Pacific Northwest and which reasonably could have been expected to naturally occur on the site. Examples include trees such as Douglas fir, Western Hemlock, Western Red Cedar, Alder, Big-leaf Maple, and Vine Maple; shrubs such as willow, elderberry, and salmonberry; and herbaceous plants such as sword fern, foam flower, and fireweed. Species, such as Himalayan Blackberry, Scotch Broom, or Reed Canary grass are not considered native species.

- (1) Tree and Forest Retention Area shall be measured from the outside of the tree canopy.
- (2) The total area below the tree canopy shall have at least 30% of the surface area covered by native vegetation containing a dense growth of trees, plants, and underbrush.
- (3) Tree and Forest Retention Areas can be discontinuous.
- (4) Preserved Tree and Forest Retention Areas shall count toward landscaping requirements.
- (5) Critical areas and their buffers may be counted towards this standard so long as they contain existing forest cover (e.g., a steep slope with Douglas fir may be counted while one with Himalayan blackberry may not). Land below an ordinary high water mark shall not be counted towards the required forest cover area.
- (6) The applicant shall receive an additional 4 credits if area is protected in a conservation easement or a non-building tract owned in common by all lots within a subdivision consistent with WCC 20.50.130.

**20.50.430 Development Requirements.**

- (1) Trees to be retained shall be healthy and free of disease.
- (2) Healthy trees should be retained to the maximum extent possible.
- (3) Trees shall be retained in stands or clusters, or if protection of dispersed, individual trees is necessary to meet objectives, specific trees selected for protection should have live crown ratios greater than 30%.
- (4) Development within the Tree and Forest Retention Area is consistent with requirements for critical areas in WCC 16.16.230 and 16.16.235.
- (5) Prior to any clearing activity or development activity, any tree canopy area designated for retention shall be delineated by temporary fencing, tape, or other indicators around the outer dripline of the trees. Temporary fencing, tape, or other indicators shall be clearly visible and shall be maintained for the duration of the proposed clearing or development activity. Any tree canopy areas designated for retention shall be field verified by the technical administrator before clearing activities begin. Trees within canopy areas designated for retention shall not be damaged by clearing, excavation, ground surface level changes, soil compaction, or any other activities that may cause damage to roots or trunks. Machinery, impervious surfaces, fill and storage of construction materials shall be kept outside of the dripline of the tree canopy areas designated for retention.

**20.50.440 Protection and Maintenance.**

- (1) Protection shall include a notice on title consistent with Protective Native Growth Area covenant requirements in WCDS Chapter 2, Section 221.
- (2) Tree canopy areas may be modified under the following circumstances:
  - (a) Fire prevention methods when supported by the county fire marshal;
  - (b) Hazard trees, as defined in WCC [16.16.900](#), are identified (an evaluation and determination by a licensed arborist or forester may be required);
  - (c) Limited window or view trimming is allowed for view purposes consistent with WCC 16.16.235.(G)

**20.50.500 Revegetation.**

The following outlines the scoring criteria for the landscaping and revegetation LID technique.

**20.50.510 Percentage of Property Revegetated with Native Trees and Shrubs**

<b>Within UGA</b>	< 2 %	2 – 5 %	> 5 – 15 %	> 15 – 20 %	> 20 %	Conservation Easement or Non-Building Tract
<b>Outside of UGA</b>	< 2 %	2 – 10 %	> 10 – 30 %	> 30 – 50 %	> 50 %	

  

<b>Points Received</b>	0 points	3 points	6 points	9 points	12 points	+ 4 points
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**20.50.515 Percentage of Degraded Wetland/Stream Buffer to be Revegetated.**

	0 – 50 %	> 50%
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<b>Additional Points Received</b>	+ 3 points <sup>1</sup>	+ 6 points
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**20.50.520 Scoring Criteria**

- (1) The area of revegetation is based upon the percentage of the development parcel(s) that is revegetated through planting.
- (2) Additional points are earned if the revegetation area contains wetland and/or stream buffer.
  - (a) If revegetation of Critical areas or buffer is done as part of mitigation, no credits shall be awarded.
- (3) The applicant receives an additional 4 credits if the area is protected in a conservation easement or a non-building tract owned in common by all lots within a subdivision consistent with WCC 20.50.130.

**20.50.530 Revegetation Requirements.**

- (1) Revegetation areas shall meet the following standards:
  - (a) Native vegetation areas shall be replanted with species indigenous to the Northwest or suitable for the Pacific Northwest climate:
    - (i) See plant list in the Birch Bay LID Manual; or
    - (ii) Native vegetation list see Appendix C of Stormwater Special District standards, WCDS Section 221.
  - (b) Reforested areas shall be replanted with a minimum of 25% deciduous species and 50% coniferous species, and 25% shrub species.

(c) Planting density, techniques, and maintenance shall be done in accordance with the Birch Bay LID Manual.

**20.50.530 Protection and Maintenance.**

(1) Protection shall include a notice on title consistent with Protective Native Growth Area covenant requirements in WCDS Chapter 2, Section 221.

**20.50.600 Impervious Surface.**

The following outlines the scoring criteria for impervious surface coverage. The LID point score is based upon the percentage of impervious surface area on the development parcel(s).

**20.50.610 Percent Area of Impervious Surface**

<b>Within UGA</b>	> 60 %	> 40 – 60 %	20 – 40 %	< 20 %	Redevelopment that decreases the existing area of impervious surface
<b>Outside of UGA</b>	> 30 %	> 20 – 30 %	10 – 20 %	< 10 %	
<b>Points Received</b>	0 points	4 points	8 points	12 points	12 points

**20.50.615 Scoring Criteria**

- (1) For properties within the jurisdiction of the Shoreline Management Program (WCC Title 23), submerged lands and/or tidelands within the boundaries of any waterfront parcel that are located waterward of the ordinary high water mark shall not be used in impervious/pervious surface calculations.
- (2) Any portion of a roof overhang or other overhanging architectural feature which projects further than three feet from the footprint of a structure, except green roofs, shall be calculated as impervious surface.
- (3) Alternative surface methods described in WCC 20.50.623 shall be counted as pervious area unless an underdrain is used.
- (4) Green roofs described in WCC 20.50.626 shall be counted as pervious area.
- (5) Points shall be given for the area of a parcel that is impervious, or for the redevelopment of a parcel, not both.

**20.50.620 Development Requirements.**

**.621 Parking space dimensions.**

A standard parking space shall have the rectangular dimensions of 10 feet in width and 20 feet in length; provided, that for any parking area of six or more spaces, 50 percent of all spaces may have the rectangular dimensions of eight feet in width and 15 feet in length; and further provided, that these spaces are marked for use by compact automobiles. Except in single-family residential areas, all dimensions shall be exclusive of driveways, aisles and other circulation areas required under WCC [20.80.560](#) and [20.80.570](#).

**.622 Parking requirements.**

Parking shall conform to the requirements of WCC [20.80.500](#) through [20.80.590](#) unless otherwise specified in this section. Minimum parking requirements may be reduced through any of the following methods:

(1) A shared parking agreement has been filed with the county auditor establishing a shared parking lot for land uses with noncompeting hours of operation, or for multitenant retail and commercial facilities; provided, the parking lot is not located further than 700 feet from any of the uses it is intended to serve.

(a) The minimum required parking in shared facilities shall be based on the land use with the highest parking demand.

(b) Mixed use developments with similar operating hours may be required to submit a parking demand study to determine if parking can be combined.

(2) A 20 percent reduction may be approved if an establishment is located within 1,000 feet of any regularly scheduled bus stop.

(3) The zoning administrator determines that a reduced requirement will reduce overall impervious surfaces while maintaining consistency with this title.

**.623 Alternative surfacing methods.**

Alternative surfaces including, but not limited to, bark or wood mulch, washed gravel, grid/lattice systems, permeable interlocking pavers, pervious concrete, porous asphalt, and other similar approved materials are encouraged. Alternative surfacing methods may be approved for fringe or overflow parking areas; emergency parking areas, private roads, fire lanes, road shoulders, bike paths, walkways, patios, driveways, and easement service roads in residential or commercial zones unless site constraints make use of such materials detrimental to water quality. Utilization of alternative surfacing methods shall be subject to review and approval by the Whatcom County Public Works Department, the Fire Marshal and/or the county ADA coordinator for compliance with other applicable regulations and development standards. Surfaces shall be considered impervious surfaces unless the following conditions are met:

(1) Bark, wood mulch, and washed gravel shall be designed and installed so that all rain water falling upon the alternative surface will be infiltrated directly beneath the alternative surface without generating surface runoff based on the one-year, 24-hour storm event.

(2) Other alternative surface methods shall be designed and installed in accordance with the guidelines in the current edition of the *Low Impact Development Technical Guidance Manual for Puget Sound*, as applicable.

**.624 Vehicular access.**

Driveways and curb cuts shall be minimized along all arterial and collector roads. Each existing lot shall be allowed only one driveway or curb cut; adjacent lots are encouraged to share access points. In new

developments, lots or leased sites shall be oriented toward internal driveways, parking areas, or roads with limited access to arterial or collector roads.

**.625 Roads, curbs, gutters and sidewalks.**

The intent of this section is to reduce impervious surfaces and stormwater runoff. Innovative street sections, which do not compromise public safety, shall be encouraged in the watershed. The following shall be permitted with the approval of the Whatcom County public works department:

- (1) Narrow streets and reduced sidewalk standards that satisfy pedestrian and vehicular circulation requirements may be implemented.
- (2) For low volume streets with an average daily traffic volume up to 500, the Special District road standards of WCDS Chapter 5, or similar design.

**.626 Green Roof**

Green roofs shall be designed and constructed using the current edition of the *LID Technical Guidance Manual for Puget Sound*. Green roofs shall not be counted as impervious surface.

**20.50.630 Protection and Maintenance**

- (1) Maximum impervious area allowed per table 20.50.610 shall be recorded on a stormwater protective covenant.
  - (a) Future additions of impervious surface shall be approved with the documented removal of an equal area of impervious area on-site or in the same watershed.

**20.50.700 LID Stormwater Design.**

**20.50.710 Percentage of Stormwater Runoff Treated Onsite, Using LID BMPs.**

91 – 95 %	> 95 – 98 %	> 98 – < 100 %	100 %
↓	↓	↓	↓
Prerequisite	6 points	10 points	14 points

**20.50.715 Scoring Criteria.**

To qualify for benefits under this program, small scale and large scale stormwater projects shall use LID practices to provide for water quality treatment of a 24 hour storm with a six month return frequency, or 91% of annual stormwater runoff volume. Credits are awarded for projects that treat stormwater runoff onsite using LID BMPs equivalent to a two year storm, a twenty-five year storm, and a one hundred year return frequency storm according to table WCC 20.50.710.

**20.41.720 Small Scale Stormwater LID Project.**

**20.50.721 Applicability:**

- (1) The requirements of this section apply to all small development projects as defined in WCC 20.80.632:
  - (a) Individual detached single-family residences, duplexes and accessory development creating less than 10,000 square feet of cumulative impervious surfaces.

- (b) All other development resulting in the creation or addition of less than 5,000 square feet of impervious surface area.
- (2) In addition to meeting the threshold in WCC 20.80.632, projects must result in less than:
  - (a) Less than  $\frac{3}{4}$ -acre of clearing and grading, and
  - (b) Less than 5,000 square feet of pollution generating impervious surface

**20.50.725 General Standards.**

Runoff discharge toward or infiltration proposed within 200' of a landslide hazard area must be evaluated by a geotechnical engineer or a qualified geologist. The discharge point may not be placed on or above slopes greater than 20% or above erosion hazard areas without evaluation by a geotechnical engineer or qualified geologist and Whatcom County approval.

**20.50.726 Development Requirements.**

Stormwater generated on-site from all new impervious surfaces shall be managed through any combination of LID best management practices (BMP) to treat at least 91% of annual stormwater runoff volume onsite.

- (1) Without site specific engineering, stormwater management requirements points shall be given according to the standards Birch Bay Low Impact Development Manual and sized according to the Stormwater Calculator, or
- (2) Points will be given with engineering to the treatment thresholds established in WCC 20.50.710, using LID best management practices provided in the current edition of the *LID Technical Guidance Manual for Puget Sound*, or any other LID best management practices approved by the Whatcom County.

**20.50.727 Protection and Maintenance.**

A declaration of covenant must be recorded for each site/lot that contains stormwater BMPs. A draft of the proposed covenant must be reviewed and approved by Whatcom County prior to recording. All required covenants must be recorded prior to final construction approval for the proposed project.

- (1) The Stormwater Facility Location covenant in Whatcom County Development Standards, Chapter 2, Section 221, or similar, can be used providing it contains the following:
  - (a) Notice to future owners of the presence of stormwater BMPs on the lot and the responsibility of the owner to retain, uphold, and protect the devices, features, pathways, limits, and restrictions.
  - (b) Include as an attachment, a recordable version of the following information:
    - (i) a site plan showing all developed surfaces, impervious and pervious, and the location and dimensions of flow control BMP devices, features, flowpaths (if applicable), and limits of native growth retention areas (if applicable). This plan(s) must be of a common engineering scale and include site topography.
    - (ii) The stormwater BMP design and maintenance details for each BMP per the Birch Bay Low Impact Development Manual. This includes a diagram (if applicable) of each flow control BMP device or feature and written maintenance and operation instructions.
  - (c) Require that each flow control BMP be operated and maintained at the owner's expense.

**20.50.730 Large Scale Stormwater LID Project.**

**20.50.731 Applicability.** The requirements of this section apply to long plats and other residential and nonresidential projects not meeting the threshold of a small development project above, in 20.50.721.

**20.50.735 Development Requirements.**

Applicants shall use the LID best management practices (BMPs) provided in the current edition of the *LID Technical Guidance Manual for Puget Sound* as the first step and preferred method in meeting stormwater flow control, detention, and treatment requirements. LID projects shall use infiltration, dispersion, and bioretention to the maximum extent practicable and minimize the use of conventional detention to manage stormwater runoff generated on-site.

- (1) Flow Control and Detention. Shall meet Whatcom County’s Stormwater Standards, WCC 20.80.634, or the current edition of the Department of Ecology, Stormwater Manual for Western Washington, flow-control minimum requirement #7, in Volume I.
  - (i) Flow control requirements may be reduced through implementation of LID Guidance Manual for Puget Sound, Section 7.2.2, dispersion for all or part of the development site.
- (2) Water quality. Low Impact Development treatment BMPs shall be designed to treat 91 percent of the annual runoff volume per *WSDOE Stormwater Management Manual for Western Washington*, outlined under Minimum Requirement #6, Runoff Treatment, in Volume I.
- (3) Sites that can fully infiltrate per *WSDOE Stormwater Management Manual for Western Washington* Volume III, Chapter 3 or fully disperse per *WSDOE Stormwater Management Manual for Western Washington* Vol V Chapter 5, BMP T5.30 are not required to provide runoff treatment or flow control facilities. These projects shall receive the highest credit score per WCC 20.50.710.

**20.50.736 Protection and Maintenance.**

- (1) All projects shall provide a maintenance plan/program that has been approved by the County, including source control BMPs as specified in Whatcom County Development Standards, Chapter 2, Section 220.
- (2) A notice on title, or with plat covenants, that protect the LID stormwater management facilities from:
  - (a) Cover by structures or impervious material;
  - (b) Soil compaction, for example by vehicular traffic; and
  - (c) Damage by soil removal and grade alteration.

**20.50.800 Native soil protection and amendment.**

The following outlines the scoring criteria for the soil amendment LID technique. The LID point score is based upon the area of the development parcel(s) that is amended with compost.

**20.50.810 Portion of Site that Receives Soil Amendment.**

No soil amendment	All construction-disturbed soils	Construction disturbed soils, plus additional 5 – 10 % of site	Construction disturbed soils, plus additional >10% of site
↓	↓	↓	↓
0 points	6 points	9 points	12 points

**20.50.830 Development Requirements.**

- (1) The duff layer and native topsoil should be retained in an undisturbed state to the maximum extent practicable. In areas requiring grading, remove and stockpile the duff layer and topsoil on site in a designated, controlled area, not adjacent to public resources and critical areas, to be reapplied to other portions of the site where feasible.

(2) Soil quality and depth. All areas subject to clearing and grading that have not been covered by impervious surface, incorporated into a drainage facility or engineered as structural fill or slope shall, at project completion, shall demonstrate compliance with the Guidelines for Implementing Soil Quality and Depth (BMP T5.13 in *Stormwater Management Manual for Western Washington - 2005* or as amended).