

**DRAFT
TOWN OF EATONVILLE**

**TITLE 18.04.200
PLANNED LOW IMPACT DEVELOPMENTS (PLID)**

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18.04A.200 Purpose.

It is the intent of this chapter to:

- A. 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.
- B. Encourage creative and coordinated site planning, the conservation of natural conditions and features, the use of appropriate new technologies and techniques, and the efficient layout of streets, utility networks and other public improvements.
- C. Minimize impervious surfaces and effective impervious surfaces.
- D. Encourage the creation or preservation of permanent forested open space.
- E. Encourage development of residential environments that are harmonious with on-site and off-site natural and built environments.
- F. Further the goals and the implementation of the policies of the comprehensive land use plan.

18.04A.210 LID Design Criteria.

Conformance to the following criteria is required for all development reviewed under the provisions of this chapter:

- A. LID projects shall meet the minimum peak and duration flow control standards per the Department of Ecology Stormwater Management Manual for Western Washington, current edition.
- B. Flow control facilities may be reduced in size through compliance with LID Technical Guidance Manual Section 7.2.2 - full dispersion for all or part of the development site.
- C. Water quality treatment BMPs shall be provided to treat 91 percent of the annual runoff volume per the Department of Ecology standards.
- D. All site soils disturbed during construction shall be rehabilitated to the specifications of Integrated Management Practice 6.2 of the Low Impact Development Guidance Manual for Puget Sound (current edition).

- E. After the certificate of occupancy is issued, there shall be no net increase in effective impervious surfaces for all PLID projects.
- F. All projects with Type A (outwash) soils shall infiltrate 100-percent of runoff.
- G. All projects shall provide a maintenance plan/program that has been approved by the town, including source control BMPs.
- H. LID projects shall reduce the size of conventional detention facilities (e.g., ponds, vaults, etc.) as follows:
 1. Calculate the volume of a conventional project by using the conventional modeling assumptions in Table 18.08A.20-2: Impervious Surface Maximum Limits and Modeling Assumptions.
 2. Reduce the conventional volume by the percentage shown in Table 18.08A.20-1: Volume Reduction and Native Vegetation Requirements to find the allowed LID project volume.
 3. Apply sufficient LID techniques to the project so that when the techniques are modeled using guidance from Chapter 7 of the LID Technical Guidance Manual for Puget Sound the conventional volume is reduced to the required volume reduction percentage found in Table 18.08A.20-1. LID projects shall preserve native vegetation area according to the percentages shown in Table 18.08A.20-1. If the site has already been disturbed, the site shall be revegetated to meet the percentages shown in Table 18.08A.20-1.

TABLE 18.08A.20-1: Volume Reduction and Native Vegetation Requirements	Minimum Volume Reduction (Infiltration < 0.30 in/hr or less) ^{1,2}	Minimum Volume Reduction (Infiltration of ≥ 0.30 in/hr or more) ^{1,2}	Native Vegetation Area ³	Maximum Impervious Surface
Non-Multifamily Residential ≤1.4 du/ac	50%	60%	35%	15%
Non-Multifamily Residential 1.5-2.4 du/ac	50%	60%	35%	15%
Non-Multifamily Residential 2.5-3.4 du/ac	50%	60%	35%	20%
Non-Multifamily Residential 3.5-4.9 du/ac	50%	60%	35%	30%
Non-Multifamily Residential 5.0-6.9 du/ac	50%	60%	20%	35%
Non-Multifamily Residential 7.0-9.9 du/ac	50%	60%	20%	40%
Non-Multifamily Residential ≥10.0 du/ac	50%	60%	20%	60%
Multi-Family ^{4,5}	40%	80%	20%	70%
Commercial ⁵	40%	80%	10%	70%

¹ The volume reduction in the table represents a reduction as compared to the volume needed for a detention volume serving a standard development.

² Infiltration rates are as measured in the field at the proposed LID location using techniques recommended in the Stormwater Management Manual for Western Washington and the *Low Impact Technical Guidance Manual for Puget Sound*.

³ Native vegetation area includes native, undisturbed areas or rehabilitation of previously disturbed areas. Native vegetation areas may integrate passive recreation facilities. Active recreation areas shall not count towards native vegetation areas total.

⁴ Impervious area includes all hard surfaces that impede infiltration of rainfall into the underlying soil profile. These surfaces include but are not limited to compacted soil, asphalt concrete pavement, cement concrete pavement, roofs, and gravel paved areas. Green roofs and minimal excavation foundations, subject to conformance with applicable Department of Ecology BMPs, are not included in the total impervious area. Rainwater

harvesting systems based on documented water balance may be used to reduce the calculated total impervious area. Permeable pavement systems such as modular grid pavement or pervious concrete count against the impervious surface totals only to the extent indicated by Section 7.1.1 of the LID Technical Guidance Manual.

⁵ Multi-family projects are those projects containing more than four dwelling units attached in a single structure, regardless of ownership mechanism.

Dwelling Units Per Acre²	Conventional % Impervious: <i>Modeling Assumption</i>	Conventional % Turf: <i>Modeling Assumption</i>
Non-Multifamily Residential ≤1.4 du/ac	15%	85%
Non-Multifamily Residential 1.5-2.4 du/ac	25%	75%
Non-Multifamily Residential 2.5-3.4 du/ac	35%	65%
Non-Multifamily Residential 3.5-4.9 du/ac	40%	60%
Non-Multifamily Residential 5.0-6.9 du/ac	50%	50%
Non-Multifamily Residential 7.0-9.9 du/ac	60%	40%
Non-Multifamily Residential ≥10.0 du/ac	80%	20%
Multifamily Residential	90%	10%
Commercial	90%	10%

¹

pervious area includes all hard surfaces that impede infiltration of rainfall into the underlying soil profile. Many LID Techniques improve the ability of water to infiltrate into the soil. These techniques count against the impervious surface totals only to the extent indicated by Chapter 7 of the LID Technical Guidance Manual.

Im

²

dwelling units per acre is based on gross density.

D

18.04A.220 Permitted uses.

Uses allowed in a low impact development shall include permitted, accessory and conditional uses allowed in and subject to the conditions of the underlying zone district(s).

18.08A.40 Conformance.

All uses and development shall conform to all relevant requirements and standards of:

- A. The zone district(s) within which the low impact development is located, except as may be modified by this chapter;
- B. The International Building and Fire Codes;
- C. All applicable density requirements of the Eatonville Development Regulations; and
- D. Other applicable official controls.

18.08A.50 General design criteria.

- A. The location of all streets, buildings, parking areas, pedestrian, bicycle and vehicular ways, and utility easements shall be designed to promote public safety, compatibility of uses, minimize effective impervious surface, preserve forested open space, and complement predevelopment site characteristics such as topography, soils, hydrology, and other natural features.
- B. Low impact developments shall record an easement or covenant against the land title to ensure that the low impact development features are protected.

18.08A.60 Native Vegetation Areas.

- A. For the purposes of calculating required area, inundated lands shall not be included; however, other sensitive areas and their buffers may be included within the Native Vegetation Area boundaries. Land below an ordinary high water mark shall not be counted towards the required native vegetation.
- B. Native Vegetation Areas shall be forested or reforested.

1. Native Vegetation Areas that do not contain sufficient tree canopy coverage shall be planted with native or near native trees with a minimum of one native tree for every 600 square feet to be replanted, in accordance with the requirements of Chapter 18.07.65
 2. Native Vegetation Areas shall be planted with vegetation that is indigenous to the Pacific Northwest or suitable for the Pacific Northwest climate. See Chapter 18.07.65 for a list of appropriate tree species.
 3. Native Vegetation Areas that do not contain sufficient native vegetation, forest litter and understorey shall be replanted. Reforested areas shall be replanted in accordance with Chapter 18.07.65
- C. Existing native vegetation, forest litter and understory shall be preserved to the extent possible in the Native Vegetation Areas in order to reduce flow velocities and encourage sheet flow on the site. Runoff discharged into native vegetation areas shall be dispersed in accordance with BMP T5.30, Volume V, of the WDOE Stormwater Management Manual for Western Washington 2005. Further guidance on full or partial dispersion of stormwater runoff is provided in Section 7.2.2 and 7.2.3 of the LID Technical Guidance Manual for Puget Sound.
- D. Development within Native Vegetation Areas shall be limited to stormwater dispersion facilities, pervious pedestrian trails, and approved surface water restoration projects. Activities within the Native Vegetation Areas shall be limited to passive recreation, removal of invasive species, amendment of disturbed soils consistent with all applicable regulations, and planting of native vegetation. Development shall be consistent with critical areas requirements and restrictions in Title 15.16 EMC.
- E. A permanent protective mechanism shall be legally established to ensure that the required Native Vegetation Area is preserved and protected in perpetuity in a form that is acceptable to both the applicant and the Town and filed with the Town auditor's office. A permanent Native Vegetation Area shall be established using one of the following mechanisms.
1. Placement in a separate non-building tract owned in common by all lots within the subdivision;
 2. Covered by a protective easement or public or private land trust dedication;
 3. Preserved through an appropriate permanent protective mechanism that provides the same level of permanent protection as subsection (a) of this section as determined by the approval authority.
- F. Restrictions on the future use of the Protective Native Growth Area shall be recorded on the face of the final plat, short plat or large lot subdivision.

18.08A.70 Native soil protection and amendment.

- A. The duff layer and native topsoils shall be retained in an undisturbed state to the maximum extent practicable. Any duff layer or topsoil removed during grading shall be stockpiled on-site in a designated, controlled area not adjacent to public resources and critical areas. The material shall be reapplied to other portions of the site where feasible.
- B. Except as otherwise provided in subsection (3), areas that have been cleared and graded or subject to prior disturbance shall be amended. Prior disturbance shall include soil compaction or removal of some or all of the duff layer or underlying topsoil. The amendment shall take place between May 1 and October 1. Replaced topsoil shall be a minimum of 8 inch depth, unless the applicant demonstrates that a different thickness will provide conditions equivalent to the soil moisture holding capacity native to the site. Replaced topsoil shall have an organic content of 10 percent dry weight and a pH between 5.5 and 7.0. The intent of amending disturbed soils is to restore the moisture holding capacity of the original undisturbed native soil to the maximum extent practicable.
- C. This section does not apply to areas would harm existing trees proposed for retention, or that, at project completion, are covered by an impervious surface, incorporated into a drainage facility or engineered as structural fill or slope.

18.08A.80 Clustering.

- A. To achieve the goals of low impact development, residential lots shall be clustered within the designated development area of the site. Clustering is intended to preserve open space, reduce total impervious surface area, and minimize development impacts on critical areas and

associated buffers (Title 15.16 EMC). Preservation of open space reduces potential stormwater runoff and associated impacts and provides area for dispersion, filtration and infiltration of stormwater.

- B. The arrangement of clustered building lots shall be designed to avoid development forms commonly known as linear, straight-line or highway strip patterns.

18.08A.90 Residential densities.

Base densities shall be consistent with the underlying zoning. A bonus density of up to 20 percent is authorized for projects complying with this chapter.

18.08A.100 Lot size, lot width, building height, impervious coverage.

- A. Lot size. Design objective: Minimize area of site disturbance. The minimum lot size of the underlying zone district may be reduced to achieve the goals in Section 18.08A.010 EMC.
- B. Lot width. Design objective: Minimize street length. The minimum lot width of the underlying zone district may be reduced to achieve the goals in Section 18.08A.010 EMC.
- C. Building setbacks. Design objective: Minimize impervious surfaces. The setbacks of the zone may be reduced to achieve the goals in Section 18.08A.010 EMC.

18.08A.110 Circulation and access.

Circulation and access provisions shall be appropriate to the scale of the project and to anticipated traffic characteristics, and consistent with the requirements of the Town road standards. Deviations from these standards may be granted where a bioretention swale with compost amended soils shall be provided within the right-of-way or easement dedicated to Eatonville adjacent to the public right-of-way or in islands created by loop roadways.

18.08A.120 Parking.

Parking shall conform to the requirements of Chapter 18.05 EMC.

18.08A.130 Alternative surfacing methods.

Alternative surfacing including, but not limited to: paving blocks, turf block, pervious concrete, porous asphalt, and other similar approved materials are encouraged. Alternative surfacing methods may be approved for parking areas, emergency parking areas, private roads, fire lanes, road shoulders, bike paths, walkways, patios, driveways, and easement service roads 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 Town's Public Works Director and Fire Marshal for compliance with other applicable regulations and development standards. Surfaces that comply with this section shall not be considered impervious surfaces under Section 13.24.070 EMC.

18.08A.140 Drainage and land alteration.

- A. Land alteration may commence when in compliance with the Town of Eatonville site development regulations.
- B. Drainage plans and improvements shall be in compliance with the Town of Eatonville drainage standards. Alternative BMPs not specifically referenced in the Eatonville standards may be considered subject to approval by the Public Works Director.

18.08A.150 Site assessment.

Low impact development site design is intended to complement the predevelopment conditions on the site. The development context shall be established by an initial site assessment consistent with the requirements of this section. The initial inventory and assessment process will provide the baseline information necessary to design strategies that preserve natural resources, preserve areas most appropriate to evaporate, transpire, and infiltrate stormwater, and achieve the goal of maintaining pre-development natural hydrologic conditions on the site. The assessment will result in a series of maps identifying streams, lakes, wetlands, and buffers; steep slopes, and other hazard areas; significant wildlife habitat areas; and permeable soils offering the best available infiltration potential. Maps can be combined as hard copies or as GIS layers to delineate the best areas to direct development. Designated development areas, which will contain all impervious surfaces and landscaped areas on

the site, should be configured to minimize soil and vegetation disturbance, buffer critical areas, and take advantage of a site's natural stormwater processing capabilities. Designated development area boundaries shall be delineated on site plans and identified on the site during site preparation and construction. Areas outside of the designated development area envelope shall be designated Native Vegetation Areas or reserve areas.

The site assessment shall be a component of the project submittal. The site assessment shall include, at a minimum, the following:

- A. A survey prepared by a registered land surveyor or registered civil engineer showing existing public and private development, including utility infrastructure, on and adjacent to the site, major and minor hydrologic features, including seeps, springs, closed depression areas, drainage swales, and contours as follows:
 - 1. Up to 10 percent slopes, two-foot contours.
 - 2. Over 10 percent to less than 20 percent slopes, five-foot contours.
 - 3. Twenty percent or greater slopes, 10-foot contours.
 - 4. Spot elevations shall be at 25 foot intervals.
- B. Location of all existing lot lines, lease areas and easements, and the location of all proposed lot lines, lease areas, and easements.
- C. A soils report prepared by a licensed geotechnical engineer or licensed engineering geologist. The report shall identify:
 - 1. Underlying soils on the site utilizing soil pits and soil grain analysis to assess infiltration capability on site. The frequency and distribution of soil pits shall be adequate to direct placement of the roads and structures away from soils that can most effectively infiltrate stormwater.
 - 2. Topologic features that may act as natural stormwater storage or conveyance and underlying soils that provide opportunities for storage and partial infiltration.
 - 3. Depth to groundwater.
 - 4. Geologic hazard areas and associated buffer requirements as defined in Title 15.16 EMC.
- D. A survey of existing native vegetation cover by a licensed landscape architect, arborist, qualified biologist identifying any forest areas on the site, species and condition of ground cover and shrub layer, and tree species, and canopy cover.
- E. A survey of wildlife habitat by a qualified biologist.
- F. A streams, wetland, and water body survey and classification report by a qualified biologist showing wetland and buffer boundaries consistent with the requirements of Title 15.16 EMC, if present.
- G. Flood hazard areas on or adjacent to the site, if present.
- H. Aquifer and wellhead protection areas on or adjacent to the site, if present.
- I. Any known historic, archaeological, and cultural features located on or adjacent to the site, if present.

18.08A.160 Textual information required.

The applicant must respond to each of the items below but the response may include estimates or approximations where exact figures are not known at the time of submittal. All estimates should be based on the applicant's best knowledge and intent of the proposal. When estimates or approximations are used they must be identified as such. The applicant should be aware that any estimates or approximations provided may be used to set development conditions or thresholds.

- A. Title Report (issued no more than 30 days prior to formal application) for all land located within the boundaries of the proposed LID project. The title report shall show all persons having an ownership interest in the property included in the LID project and a legal description that describes the exterior boundary of the LID project and lists all encumbrances affecting land within the LID project.
- B. A statement that confirms the ownership or control of the land within the boundaries of the proposed LID project and the nature of the applicant's interest in the same and the owners. If the development area has multiple owners, then all owners of record shall consented in writing to the LID project review process.

- C. Description of the proposed LID project including:
 - 1. Total gross area of the site;
 - 2. Total area of reserve area;
 - 3. Total project area (total gross site area minus total reserve area);
 - 4. Total area of designated development area;
 - 5. Total area of Native Vegetation Area;
 - 6. Total units proposed;
 - 7. Proposed number of dwelling units by type;
 - 8. Lot sizes and dimensions;
 - 9. Total area of impervious surfacing;
 - 10. Proposed ownership of land areas within the LID project both during and after construction;
 - 11. Gross density of dwelling units;
 - 12. Requested dimensional modifications;
 - 13. 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.
- D. Projected population and analysis of anticipated impact of the development upon existing utilities and community facilities and services including but not limited to water, electricity, sewer and solid waste disposal, schools, parks, open space, trails, and police and fire protection. The analysis shall include how and when these impacts are being addressed by the LID project.
- E. Report assessing adequacy of water supply to serve the proposed development.
- F. Traffic impacts, including projected trip generation for the entire development and by phase.

18.08A.170 Site plan and supporting maps and graphics.

An initial site plan and any supporting graphics, narrative descriptions and maps to show existing conditions and major details of the proposed LID project. The initial site plan and supporting graphics and maps 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.

- A. Proposed name of the development, north point, scale, date and address, and telephone number of the preparer of the site plan/supporting maps.
- B. All information included in the site assessment should be provided at a legible scale appropriate to the area covered by the proposal at the discretion of the administrator.
- C. Designated development areas.
- D. Native Vegetation Areas.
- E. Reserve areas.
- F. Areas of disturbed soils to be amended.
- G. The existing and proposed circulation system of arterial, collector and/or local streets, including right-of-way street widths, off-street parking areas, and major points of access to public rights-of-way (including major point of ingress and egress to the development). Notations of proposed ownership, public or private, shall be included where appropriate.
- H. Location and width of existing and proposed sidewalks and trails.
- I. Proposed lots and dimensions.
- J. For residential structures, provide the types and number of residential units in each structure or the range of residential structures proposed together with the range of the type and number of units per structure.
- K. For nonresidential buildings, the gross floor area of each building.
- L. The location and square footage or approximate location and square footage or acreage of all areas of all areas to be conveyed, dedicated or reserved as common open spaces, public parks, recreational areas, school sites, and similar public and semi-public uses with notations of proposed ownership included where appropriate.
- M. Landscaping and open space improvements plan or concept.
- N. The proposed treatment of the perimeter of the LID project, including materials and techniques used such as screens, fences and walls.
- O. The location of existing and proposed utilities including sanitary sewers, water lines and storm drainage facilities intended to serve the development.
- P. Existing zoning and Comprehensive Plan boundaries for the site and adjacent property.
- Q. Information of contiguous properties within 300 feet of the proposed LID project including:

1. Existing and, if known, proposed land use and streets; and
 2. Existing structures excluding accessory buildings, ownership tracts and unique natural features of the landscape, if readily accessible.
- R. A vicinity map showing the location of the site and its relationship to surrounding areas, including existing streets, major physiographic and cultural features such as railroads, lakes, streams, shorelines, schools, parks or other prominent features.
- S. Landscape plan including a tree planting plan for Native Vegetation Areas.

18.08A.180 LID project entitlement

- A. Non-residential projects conforming to the design criteria of this chapter shall be approved consistent with the land use entitlement procedures for the use within the underlying zone. For instance, a use that would require a conditional use permit, shall still require a conditional use permit.
- B. Residential subdivisions conforming to this chapter shall be processed as Planned Unit Developments. The planning commission shall use the following review criteria in place of the required findings found under EMC 18.04.190.F:
1. The proposal meets the requirements of this title;
 2. The perimeter of the project shall be compatible with the land use of adjoining properties. Compatibility includes, but is not limited to, size, scale, mass and architectural design;
 3. The proposal shall not be detrimental to existing or potential surrounding land uses as defined by the Eatonville comprehensive plan;
 4. The proposal conforms with the design criteria of this chapter.

18.08A.190 Modifications to the plan.

Requests for modifications of preliminary or final development plans shall be made in writing and shall be submitted to the planning department in the manner and form prescribed by the planning director.

- A. Modifications shall be deemed minor if the proposal remains consistent with the purpose and design criteria of this chapter and does not change any of the following:
1. Land use;
 2. Density, number of dwelling units or lots;
 3. General location or number of access points;
 4. The amount of open space;
 5. The amount of parking;
 6. The total square footage of structures;
 7. The general height of structures.
 8. The amount of impervious surfaces, unless reduced; and
 9. The amount of native vegetation.

Examples of minor modifications include but are not limited to lot line adjustments, 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. Minor modifications may be approved by the Town Planner or designee.

- B. Major modifications are those which, as determined by the Town Planner or designee, 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.