Low Impact Development Ordinance

Section 1 Purpose

The Purpose of this Ordinance is to protect, maintain and enhance the public health, safety and general welfare by establishing minimum requirements and procedures to minimize the adverse effects of development and redevelopment on the environment.

Section 2 Definitions

Buffers – Means all three kinds of buffers listed below unless a subset of the three is specifically called out:

* Stormwater Vegetative Buffer – a buffer constructed in accordance with Appendix F in Chapter 500 for the purposes of providing pollutant removal.
* Shoreland Zoning Setback Buffer – A buffer required by the municipal Shoreland Zoning Ordinance to protect a water of the State.
* General Buffer – a buffer required by the municipal ordinances to provide screening to parcels or developments from light, noise, other parcels, rubbish areas, or other areas.

Chapter 500-Means Chapter 500 of the Maine Department of Environmental Protection’s Rules.

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Climate Resilient Northeast Native Vegetation – Means plants identified as native to the Northeast as identified by the Northeast Regional Invasive Species & Climate Change (RISCC) Network or a Maine Licensed Landscape Architect.

Common Plan of Development or Sale - Means a “subdivision” as defined in Title 30-A M.R.S. §§ 4401 et seq. (the Maine Subdivision statute) and in the City of Brewer Municipality’s code of ordinances.

Construction Activity – Means any activity on a Site that result in Disturbed Area.

Discharge-Means any spilling, leaking, pumping, pouring, emptying, dumping, disposing or other addition of pollutants to the Waters of the State, other than groundwater.

Disturbed Area - Means all land areas of a Site that are stripped, graded, grubbed, filled, or excavated at any time during the site preparation or removing vegetation for, or construction of, a Site. Cutting of trees, without grubbing, stump removal, disturbance, or exposure of soil is not considered Disturbed Area. Disturbed Area does not include routine maintenance but does include redevelopment and new Impervious Areas. “Routine maintenance” is maintenance performed to maintain the original line and grade, hydraulic capacity, and original purpose of the facility. Paving impervious gravel surfaces provided that an applicant or permittee can prove the original line and grade and hydraulic capacity shall be maintained and original purpose of the gravel surface remains the same is considered routine maintenance. Replacement of a building is not considered routine maintenance of the building and is therefore considered Disturbed Area.

Drainageway-Means the same as “drainageway” defined in Chapter 500.

General Permit – Means the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4) approved October 15, 2020 and modified November 23, 2021 and any amendment or renewal thereof.

High Intensity Soil Survey – Means a Class A survey defined by the March 2009 Guidelines for Maine Certified Soil Scientist for Soil Identification and Mapping, prepared by the Maine Association of Professional Soil Scientists

High Permeability Soils – Means hydrologic soil groups A or B as determined by on-site soil testing by a certified soil scientist using a High Intensity Soil Survey.

Impervious Area - Means the total area of a Parcel covered with a low-permeability material that is highly resistant to infiltration by water, such as asphalt, concrete, or rooftop, and areas such as gravel roads and unpaved parking areas that will be compacted through design or use to reduce their permeability. Common Impervious Areas include, but are not limited to, rooftops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and macadam or other surfaces which similarly impede the natural infiltration of stormwater. Pervious pavement, pervious pavers, pervious concrete, and under drained artificial turf fields are all considered impervious. For the purpose of determining whether a Site exceeds the Impervious Surface thresholds requiring conformance to LID performance standards, the municipality may exclude these from calculation of Impervious Area if these are designed to be infiltration Stormwater Treatment Measures.

Lot-Means the same as in the City of Brewer’s Municipal Ordinances.

Low Impact Development (LID) - Means a broad approach to site planning that preserves natural resources, processes, and habitat, defines what portions of the site are suitable for development and then utilizes Stormwater Treatment Measures to manage runoff from the proposed developed impervious areas. In LID, Stormwater Treatment Measures using natural processes such as vegetated buffers are given preference over constructed treatment Stormwater Treatment Measures. The goals of LID are to minimize the environmental impacts of the development.

Maine Licensed Landscape Architect – Means a person who has an active Landscape Architects license from the Maine Board of Licensure for Architects, Landscape Architects, and Interior Designers.

Maine Native Vegetation – Means vegetation including grass seed mixtures, identified as native to Maine from lists maintained by: US Department of Agriculture Hardiness Zones by the Maine Cooperative Extension, Wild Seed Project, Regional Soil and Water Conservation District, Maine YardScaping Program, or a Maine Licensed Landscape Architect.

Municipal Separate Storm Sewer Systems (MS4) - Means a conveyance or system of conveyances designed or used for collecting or conveying stormwater (other than a publicly owned treatment works (POTW), as defined at 40 CFR 122.2, or a combined sewer), including, but not limited to, roads with drainage systems, municipal roads, catch basins, curbs, gutters, ditches, human-made channels or storm drains owned or operated by any municipality, sewer or sewage district, Maine Department of Transportation (MDOT), Maine Turnpike Authority (MTA), State agency or Federal agency or other public entity that Discharges to Waters of the State other than groundwater.

Municipality – Means the City of Brewer .

New Development-New Development or Construction means activity undertaken to develop property, including but not limited to: the construction of buildings, parking lots, roads and other impervious surfaces, landscaping, and other activities that disturb land areas. New Development or Construction does not include redevelopment or maintenance. Permitted municipalities may define New Development more stringently.

Parcel – Means the same as "Tract or parcel of land" as defined at 30 M.R.S. §4401.6 et seq. Tract or parcel of land means all contiguous land in the same ownership, except on lands located on opposite sides of a public or private road are considered each a separate tract or parcel of land unless the road was established by the owner of the land on both sides of the road after September 22, 1971.

Permitting Authority - Means the Code Enforcement Officer, Building Inspector, Planning Board, or other official or body authorized by State law or the Municipality’s ordinances to approve development or redevelopment of Sites.

Project-Means Construction Activity undertaken for new development or redevelopment, both defined in the General Permit, located on a site that will Discharge Stormwater to a Small MS4 located partially or entirely within the Municipality.

Protected Natural Resource - Means coastal sand dunes, coastal wetlands, significant wildlife habitat, fragile mountain areas, freshwater wetlands, community public water system primary protection areas, great ponds, or rivers, streams or brooks as defined in the Natural Resources Protection Act at 38 M.R.S. §480-B.

Redevelopment-The General Permit defines Redevelopment as an activity, not including maintenance, undertaken to redevelop or otherwise improve property in which the newly developed area is located within the same footprint as the existing developed area.

Regulated Small MS4 - Means any Small MS4 authorized by the most recent, in-force MS4 General Permit or the general permits for the Discharge of stormwater from MDOT and MTA Small MS4s or state or federally owned or operated Small MS4s including all those located partially or entirely within an Urbanized Area.

Runoff – Means the part of precipitation from rain or melting ice and snow that flows across a surface as sheet flow, shallow concentrated flow or in drainage ways.

Rural Areas – Areas designated as rural on the municipal zoning map.

Small MS4 - Means any MS4 that is not already covered by the Phase I MS4 stormwater program including municipally owned or operated storm sewer systems, state, or federally owned systems, such as colleges, universities, prisons, military bases and facilities, and transportation entities such as MDOT and MTA road systems and facilities. See also 40 CFR 122.26(b)(16).

Significant and Essential Wildlife Habitats – Means the areas identified as Significant or Essential Habitats of endangered or threatened species as identified by the Maine Department of Inland Fisheries and Wildlife either on the Beginning with Habitat viewer or in consultation with the Maine Department of Inland Fisheries and Wildlife.

Site - Means the portion of a Parcel or Common Plan of Development, which is proposed for Construction Activity including open space, Stormwater Treatment Measures, and Disturbed Area, subject to this Ordinance.

Stormwater-Means the part of the precipitation including Runoff from rain or melting ice and snow that flows across the surface as sheet flow, shallow concentrated flow, or in Drainageways. “Stormwater” has the same meaning as “storm water”.

Stream Crossing - Means the mechanism by which any road, sidewalk or other structural feature of a Site will cross, or pass over or through a Water of the State which has a stream bank full width of 6 feet or less.

Stream Crossing designed in accordance with Maine Stream Smart Principles – Means a Stream Crossing designed by a Maine Professional Engineer who has completed the Maine Audubon Society Stream Smart Workshops (Parts I and II), which includes the standards recommended by that program’s stream span, elevation, slope and skew and substrate to promote passage of fish and other organisms and to limit road-damaging flows from extreme weather.

Stormwater Treatment Measure – Means a stormwater management system or innovative treatment measure as described in Maine DEP Chapter 500 4.c.(3) Types of treatment measures allowed. These measures include wet ponds, vegetated soil filters, infiltration, buffers, or innovative treatment measures. For purposes of this Ordinance these are cumulatively referred to as Stormwater Treatment Measures, or individually referred to as Stormwater Treatment Wet Pond, Stormwater Treatment Vegetated Soil Filter, Stormwater Treatment Infiltration Measure, Stormwater Treatment Buffer, or Stormwater Treatment Innovative Measure.

Suburban Areas – Means areas designated as Suburban on the municipal zoning map.

Time of Concentration – Means the same as “Time of concentration” defined in Maine DEP Chapter 500.

Urban Areas – Means areas designated as Urban on the municipal zoning map.

Urbanized Area - Means the area of the Municipality so defined by the inclusive sum of the 2000 decennial census and the 2010 decennial census by the U.S. Census Bureau.

Waters of the State – See 38 M.R.S. §361-A (7).

Section 3 Applicability

The LID Performance Standards contained in Section 7 apply to any Site initially applying for a permit from the municipality after 6/30/2024, with stormwater discharges to the Regulated Small MS4 within the Municipality’s Urbanized Area, that results in:

a. Construction Activity with Disturbed Area of one or more acres of land, or

b. Construction Activity with Disturbed Area that is less than one acre of land if the Construction Activity creating Disturbed Area less than one acre of land is part of a larger Common Plan of Development or Sale that as approved or amended would create Disturbed Area of one acre or more.

Additionally, notwithstanding other provisions in municipal ordinances or state law, requirements to plant “Climate-Resilient Maine Native Vegetation”, “Maine Native Plants” or “Climate Resilient Northeast Native Vegetation” shall not be construed as a restriction on the rights of individuals to engage in agricultural practices that are legally protected by the Maine Agriculture Protection Act and the “Right to Food” provision in the Maine Constitution (Constitution, Art. I, §25).

Section 4 Procedure

The Low Impact Development ordinance will use the most current Municipal procedure for the review and approval of Subdivisions and Site Plans as its procedure for reviewing and approving Low Impact Development.

Section 5 Submission Requirements

The following are essential elements of the Low Impact Development ordinance and must be contained within any Subdivision or Site Plan submission.

5.1 Project Narrative

The applicant shall provide a Project narrative describing:

* The overall approach to stormwater management at the site
* A listing of Stormwater Treatment Measures that will be in use and which will be maintained privately and which will be offered to the municipality for operation
* how they have prioritized protection of the sensitive areas from disturbance
* a rationale for any exceptions from performance standards (see Sections 7 and 11)

5.2 Project Contacts and Qualifications

The applicant shall provide contact information (i.e., name, company if applicable, phone number, physical address, and email address) as described below:

* Maine Licensed Landscape Architect
* Maine Certified Soil Scientist
* Maine Professional Engineer

5.3 Project Plans Content

The Project Plans shall consist of a graphic representation of the Site at a scale no smaller than 1 inch = 100 feet showing:

* Waters of the State and their associated Shoreland Protection areas
* Protected Natural Resources
* Predevelopment drainage areas, pathways and associated Time of Concentration
* High Permeability Soils
* Maine Native and Climate-Resilient Northeastern Native Vegetation in General Buffer areas and Shoreland Zoning Buffer areas
* Significant and Essential Wildlife Habitats
* Limits of disturbance
* Post-development drainage areas, pathways and associated Time of Concentration
* Locations of snow storage areas
* Stormwater Treatment Measures to be used

5.4 Submittals related to Infiltration Performance Standard

The applicant shall submit the following permit to review of the Project application under the Low Impact Development Performance Standards for infiltration.

The LID Performance Standards for Infiltration require the following submittals:

* Information required by Chapter 500 Section (7)(D)(5)(c) Infiltration Submittals including a plan for use of de-icing materials, pesticides and fertilizers within the drainage area of any infiltration Stormwater Treatment Measures.
* Locations of any Uncontrolled Hazardous Substance Sites, Voluntary Response Action Program sites, RCRA Corrective Action sites, or Petroleum Remediation sites on or adjacent to the Site.

Section 6 Approval Standards

The following criteria shall be used by the Permitting Authority in reviewing applications for site plan/subdivision review and shall serve as minimum requirements for approval of the Site application:

* The Project protects sensitive areas, provides on-site volume control, provides treatment of stormwater, and minimizes impervious areas

Section 7 Performance Standards

Prioritize the protection of the following sensitive areas as listed below (highest priority listed first) by not disturbing land in these areas:

i. Waters of the State and associated shoreland protection areas.

ii. Protected Natural Resources

iii. Predevelopment drainage pathways

iv. High Permeability Soils

v. Maine Native and Climate-Resilient Northeastern Native Vegetation in General Buffer areas and Shoreland Zoning Setback Buffer areas

vi. Significant and Essential Wildlife Habitats

Note that the applicant will need to provide a description in their narrative of how they have prioritized these areas for protection from disturbance. These areas may be counted toward the open space requirements.

Exception: Removal of Maine Native and Climate-Resilient Northeastern Native Vegetation that is diseased or in poor condition is allowed.

 1. Minimize Site Clearing

2. Protect natural drainage system

3. Minimize Decrease in Time of Concentration

4. Minimize Impervious Area

5. Minimize Effect of Impervious Area

6. Minimize Soil Compaction

7. Minimize lawns and maximize landscaping that encourages runoff retention.

8. Provide Vegetated open channel conveyance systems

9. Stormwater Quality Treatment and Retention Requirements

The Low Impact Development ordinance applies to any appropriate project undertaken partially or entirely within the Municipal boundaries of the City of Brewer. Some Performance Standards apply more specifically to either Rural, Suburban, or Urban areas of the municipality, but all projects should adhere to as many Low Impact Development standards as possible.

7.1 Construction Documents

Construction documents shall depict limits of disturbance. Limits of disturbance shall be established on-site prior to disturbance using flagging, fencing, signs or other means to provide a clear indication.

* Minimize Site Clearing in Rural, Suburban, and Urban areas

7.2 Stream Crossings

Stream Crossings for Waters of the State shall use Maine Stream Smart Principles to preserve natural pre-development drainage pathways. Exception: Stream crossings over portions of streams that are artificially channelized are not subject to this standard.

* Protect natural drainage system in Rural, Suburban, and Urban areas
* Minimize decrease in time of concentration in Rural, Suburban and Urban areas

7.3 Natural Drainageways

Rural and Suburban developments shall preserve the natural pre-development drainage pathways on site by using the natural flow patterns and pathways for the post-construction drainage system.

Exceptions are allowed if the Time of Concentration for predevelopment drainage pathways is the same as for post development drainage pathway.

Exception: The applicant may submit an “alternative analysis” which demonstrates that this performance standard is impracticable.

* Protect natural drainage system in Rural and Suburban areas
* Minimize decrease in time of concentration in Rural and Suburban areas

7.4 Sites one acre or more

Sites that disturb one acre of land or more shall include Stormwater Treatment Measures in accordance with Maine DEP Chapter 500 Section 4.C General Standards 4.C.(2) Treatment requirements, 4.C.(3) Treatment Measures, and 4.D Phosphorus standard (for lake watersheds only) and additionally:

1. Individual Stormwater Treatment Measure may not treat more than 1-acre of impervious cover
2. Vegetation used in Stormwater Treatment Measures shall be Maine Native or Climate-Resilient Northeastern Native Vegetation

Note that although Chapter 500 General Standards and Phosphorus standard have higher thresholds for developed and impervious area, these standards apply to sites within the urbanized area of the municipality at a lower threshold.

* Protect natural drainage system in Rural, Suburban and Urban areas
* Minimize Effect of Impervious Area Rural, Suburban and Urban areas
* Stormwater Quality Treatment and Retention Requirements Rural, Suburban and Urban areas

7.5 Infiltration Standard

Provide volume control on-site (through infiltration or storage) in accordance with the following:

1. Volume to be controlled= (total area of impervious cover after development – total area that existed before development) x Rd
2. Where Rd is the groundwater recharge depth based on the USDA/NRCDS hydrologic soil group as follows: Rd = 0.40 inches or rain for type A soils, 0.25 inches of rain for type B soils, 0.10 inches of rain for type C soils and 0 for type D soils
3. Stormwater Treatment Measures with liners may not be used to meet the volume requirement via storage
4. Restrictions and requirements identified in Sections D(2) through D(4) of Appendix D Infiltration basins, drywells, and subsurface fluid distribution systems; of Chapter 500 apply.

Exception: For sites in Rural and Suburban areas where infiltration will disrupt the preservation of the predevelopment drainage pathways, an exception from the infiltration standard will be allowed.

Exception: If any Uncontrolled Hazardous Substance Sites, Voluntary Response Action Program sites, RCRA Corrective Action sites, or Petroleum Remediation sites are on or adjacent to the Site, the Site does not need to meet the volume control standard.

Exception: Municipalities may allow infiltration on an alternative site within the same watershed in-lieu of on-site infiltration.

* Minimize Effect of Impervious Area in Rural, Suburban and Urban areas

7.6 Minimize Impervious Area

Minimize Impervious Area and the Effect of Impervious Area from road runoff by ensuring at least 70% of Roadway runoff is directed into a Stormwater Treatment Measure

* Minimize Impervious Area in Rural, Suburban, and Urban areas
* Minimize Effect of Impervious Area in Rural, Suburban and Urban areas

7.7 Parking Lots

Minimize Impervious Area from parking areas by making the standard vehicle parking stall a maximum of 9-foot x 18-foot.

Exception: Public Safety Vehicle Parking

* Minimize Impervious Areas in Rural, Suburban, and Urban areas

7.8 Runoff

Runoff from on-site roofs, sidewalks, and peak-use overflow parking runoff shall be directed into Stormwater Treatment Buffers or Stormwater Treatment Infiltration Measures.

* Minimize Effect of Impervious Area in Rural, Suburban and Urban areas
* Provide Vegetated Open-Channel Conveyance Systems in Rural, Suburban, and Urban areas

7.9 Disturbed Areas

Construction equipment movement, laydown areas and parking shall be restricted to the disturbed area.

Areas to be vegetated shall be tilled and the soils amended with organic matter as needed based on the results of soil tests.

* Minimize Soil Compaction in Rural, Suburban and Urban areas

7.10 Snow Storage

Snow storage areas shall be depicted on site plans. The location of snow storage areas in Stormwater Treatment Measures and Shoreland Zoning Setback Buffers shall be prohibited.

* Minimize Effect of Impervious Area in Rural, Suburban and Urban areas

Section 8 Enforcement

The Low Impact Development ordinance will use the most current Municipal procedure for the review and approval of Subdivisions and Site Plans as its procedure for reviewing and approving Low Impact Development. The Authority responsible for approving Subdivision and Site Plans will have the responsibility of enforcing these standards.

Section 9 Severability and Conflicts

The Low Impact Development ordinance will use the most current Municipal procedure for the review and approval of Subdivisions and Site Plans as its procedure for reviewing and approving Low Impact Development. The Severability and Conflict procedures within the municipal entity responsible for approving Subdivision and Site Plans will have the responsibility of implementing any necessary Severability or Conflict procedures.

Section 10 Waivers

Some exceptions are allowed from the Performance Standards listed in Section 7 provided the applicant provides a narrative rationale justifying the exception and the responsible party within the Municipality accepts the rationale and grants the exception.

Section 11 Authority

The Municipality enacts the LID Model Ordinance Strategies Provisions pursuant to 30-A M.R.S. §§3001 et seq. (municipal home rule ordinance authority), 38 M.R.S. §413 (the Wastewater Discharge Law), 33 USC §§1251 et seq. (the Clean Water Act), and 40 CFR Part 122 (US Environmental Protection Agency’s regulations governing the National Pollution Discharge Elimination System (NPDES)). The Maine Department of Environmental Protection, through its promulgation of the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems has listed the Municipality as having a Regulated Small MS4; under this General Permit, listing as a Regulated Small MS4 necessitates enactment of elements of this Ordinance as part of the Municipality’s stormwater management program in order to satisfy the minimum control measures for Post Construction Stormwater Management in New Development and Redevelopment.