Model Highlands Land Use Ordinance for Municipalities

Prepared by the State of New Jersey Highlands Water Protection and Planning Council in Support of the Highlands Regional Master Plan

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HIGHLANDS AREA LAND USE ORDINANCE

A Supplement to the Land Use Ordinances of

BOROUGH/TOWNSHIP/TOWN OF

OAKLAND

BERGEN COUNTY, NEW JERSEY

DRAFT for submission to the New Jersey Highlands Water Protection and Planning Council toward achieving plan conformance with the Highlands Regional Master Plan

DATE: DECEMBER ___________, 2009

This document is based on a model Highlands Element prepared and provided to all Highlands municipalities by the New Jersey Highlands Water Protection and Planning Council. Modifications required to tailor it for application to the Borough/Township/Town of Oakland were provided by the individual indicated below.

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DRAFT FOR MUNICIPAL REVIEW
Table of Contents

Article 1. Title, Purpose, Scope.......................................................................................................................... 9
  § 1.1 Short Title.................................................................................................................................................... 9
  § 1.2 Purpose ..................................................................................................................................................... 9
  § 1.3 Scope ......................................................................................................................................................... 9
  § 1.4 Statutory Authority................................................................................................................................. 9
  § 1.5 Severability................................................................................................................................................ 9
  § 1.6 Effective Date ......................................................................................................................................... 9

Article 2. Applicability .......................................................................................................................................... 10
  § 2.1 Applicability .............................................................................................................................................. 10
  § 2.2 Major Highlands Development .............................................................................................................. 10
  § 2.3 Non-Major Highlands Development ....................................................................................................... 10
  § 2.4 Exemptions ............................................................................................................................................... 10
  § 2.5 Exemption Determinations .................................................................................................................... 10
  § 2.6 Development Approvals ....................................................................................................................... 10
  § 2.7 Nonconforming Uses, Buildings and Structures .................................................................................. 10

Article 3. Definitions ........................................................................................................................................... 11
  § 3.1 Word Usage ............................................................................................................................................. 11
  § 3.2 Definitions ............................................................................................................................................... 11

Article 4. Establishment of Highlands Area Districts ....................................................................................... 11
  § 4.1 Highlands Preservation Area and Planning Area .................................................................................... 11
  § 4.1.1 Highlands Area .................................................................................................................................. 11
  § 4.1.2 Preservation Area ................................................................................................................................ 11
  § 4.1.3 Planning Area ...................................................................................................................................... 11
  § 4.2 Highlands Zones and Sub-Zones ............................................................................................................ 11
  § 4.2.1 Protection Zone ................................................................................................................................. 11
  § 4.2.2 Wildlife Management Sub-Zone ........................................................................................................ 11
  § 4.2.3 Conservation Zone ............................................................................................................................ 11
  § 4.2.4 Conservation Zone – Environmentally Constrained Sub-Zone ......................................................... 11
  § 4.2.5 Existing Community Zone ................................................................................................................ 11
  § 4.2.6 Existing Community Zone – Environmentally Constrained Sub-Zone ............................................ 11
  § 4.2.7 Lake Community Sub-Zone ............................................................................................................... 11
  § 4.3 Highlands Resource and Special Protection Areas ................................................................................ 11
  § 4.3.1 Forest Resource Area ......................................................................................................................... 11
| § 4.3.2 Highlands Open Waters | Deleted: 31 |
| § 4.3.3 Riparian Areas | Deleted: 31 |
| § 4.3.4 Steep Slope Protection Area | Deleted: 31 |
| § 4.3.5 Critical Habitat | Deleted: 32 |
| § 4.3.6 Carbonate Rock Areas | Deleted: 32 |
| § 4.3.7 Lake Management Area | Deleted: 32 |
| § 4.3.8 Prime Ground Water Recharge Areas | Deleted: 33 |
| § 4.3.9 Wellhead Protection Areas | Deleted: 33 |
| § 4.3.10 Highlands Special Environmental Zone | Deleted: 33 |
| § 4.3.11 Agricultural Resource Area | Deleted: 33 |
| § 4.3.12 Highlands Historic, Cultural and Archaeological Resources | Deleted: 33 |
| § 4.3.13 Highlands Scenic Resources | Deleted: 33 |
| § 4.4 Adoption of Highlands Area District Maps | Deleted: 34 |
| § 4.4.1 Borough/Township/Town Highlands Area | Deleted: 34 |
| § 4.4.2 Highlands Zones and Sub-Zones | Deleted: 34 |
| § 4.4.3 Highlands Area Resource and Special Protection Areas | Deleted: 34 |
| § 4.5 Interpretation of District Maps Boundary Lines | Deleted: 35 |
| § 4.5.1 Municipal Boundary Lines | Deleted: 35 |
| § 4.5.2 Borough/Township/Town Highlands Area | Deleted: 35 |
| § 4.5.3 Highlands Zones, Sub-Zones, Resource Areas, Special Protection Areas | Deleted: 36 |
| § 4.5.4 Mapping Conflicts | Deleted: 36 |

Article 5. Highlands Area Zone District Regulations

§ 5.1 Applicability

§ 5.2 Use Regulations

§ 5.2.1 Permitted Uses

§ 5.2.2 Conditional Uses

§ 5.2.3 Prohibited Uses

§ 5.3 Density and Intensity of Development

§ 5.3.1 Use of Terms

§ 5.3.2 Applicability

§ 5.3.3 Base Maps

§ 5.3.4 Development Subject to Water Availability

§ 5.3.5 Development Served by Septic Systems

§ 5.3.6 Development Served by Existing or Extended Utility Infrastructure

§ 5.3.7 New or Extended Utility Infrastructure

§ 5.3.8 Development Served by New or Extended Utilities

Article 6. Highlands Area Resource Regulations

DRAFT FOR MUNICIPAL REVIEW
| § 6.1 Forest Resources | 51 |
| § 6.1.1 Findings | 51 |
| § 6.1.2 Total Forest Area | 51 |
| § 6.1.3 Forest Subwatershed Integrity Areas | 51 |
| § 6.1.4 Clear-Cutting Prohibited | 51 |
| § 6.1.5 Preservation Area Standards | 51 |
| § 6.1.6 Planning Area Standards | 52 |
| § 6.1.7 Forest Impact Reports Required | 52 |
| § 6.1.8 Forest Mitigation Plans | 54 |
| § 6.2 Highlands Open Waters & Riparian Resources | 55 |
| § 6.2.1 Findings | 55 |
| § 6.2.2 Watershed Resource Value Areas | 55 |
| § 6.2.3 Riparian Subwatershed Integrity Areas | 56 |
| § 6.2.4 Highlands Open Waters Protection Buffer | 56 |
| § 6.2.5 Highlands Open Waters Buffer Standards | 56 |
| § 6.2.6 Riparian Area Standards | 60 |
| § 6.2.7 Functional Value Assessment Required | 61 |
| § 6.3 Steep Slopes | 62 |
| § 6.3.1 Findings | 62 |
| § 6.3.2 Applicability | 62 |
| § 6.3.3 Steep Slope Standards | 63 |
| § 6.4 Critical Habitat | 65 |
| § 6.4.1 Findings | 65 |
| § 6.4.2 Disturbance Prohibited | 65 |
| § 6.4.3 Habitat Conservation and Management Plan | 66 |
| § 6.5 Carbonate Rock | 66 |
| § 6.5.1 Findings | 66 |
| § 6.5.2 Applicability | 66 |
| § 6.5.3 Geotechnical Investigation Required | 66 |
| § 6.5.4 Carbonate Rock Drainage Area | 69 |
| § 6.5.5 Conditions of Development Application Approval | 69 |
| § 6.6 Lake Management Area | 70 |
| § 6.6.1 Findings | 70 |
| § 6.6.2 Shoreland Protection Tier | 71 |
| § 6.6.3 Water Quality Management Tier | 72 |
| § 6.6.4 Scenic Resources Tier | 73 |
| § 6.7 Water Conservation & Deficit Mitigation | 74 |
§ 6.7.1 Findings .................................................................................................................. 74
§ 6.7.2 Applicability........................................................................................................... 74
§ 6.7.3 Water Conservation Requirements ........................................................................ 75
§ 6.7.4 Net Water Availability ........................................................................................... 75
§ 6.7.5 Conditional Water Availability .............................................................................. 75
§ 6.7.6 Water Use and Conservation Management Plan .................................................... 75
§ 6.7.7 Absence of Water Use and Conservation Management Plan .................................. 75
§ 6.8 Prime Ground Water Recharge Areas ...................................................................... 79
§ 6.8.1 Findings ................................................................................................................. 79
§ 6.8.2 Applicability........................................................................................................... 80
§ 6.8.3 Standards ................................................................................................................ 80
§ 6.8.4 Potential Contaminant Sources .............................................................................. 80
§ 6.9 Wellhead Protection .................................................................................................. 80
§ 6.9.1 Findings ................................................................................................................. 80
§ 6.9.2 Applicability........................................................................................................... 81
§ 6.9.3 Potential Contaminant Sources .............................................................................. 81
§ 6.10 Agricultural Resources ........................................................................................... 81
§ 6.10.1 Findings ................................................................................................................. 81
§ 6.10.2 Applicability........................................................................................................... 82
§ 6.10.3 Agricultural Resource Area ................................................................................... 82
§ 6.10.4 Conditions of Approval ....................................................................................... 82
§ 6.10.5 Right to Farm ....................................................................................................... 83
§ 6.10.6 Approvals Subject to Outside Jurisdiction ............................................................ 83
§ 6.11 Historic, Cultural & Archaeological Resources ...................................................... 84
§ 6.11.1 Findings ................................................................................................................. 84
§ 6.11.2 Applicability........................................................................................................... 84
§ 6.11.3 Referral to Highlands Council Required .............................................................. 84
§ 6.11.4 Exceptions ............................................................................................................. 84
§ 6.12 Scenic Resources .................................................................................................... 84
§ 6.12.1 Findings ................................................................................................................. 84
§ 6.12.2 Applicability........................................................................................................... 85
§ 6.12.3 Referral to Highlands Council Required .............................................................. 85
§ 6.12.4 Exceptions ............................................................................................................. 85

Article 7. Highlands Area General Regulations ................................................................. 86
§ 7.1 Low Impact Development ......................................................................................... 86
§ 7.1.1 Applicability........................................................................................................... 86
§ 7.1.2 Standards ................................................................................................................ 86

DRAFT FOR MUNICIPAL REVIEW
# MODEL HIGHLANDS AREA LAND USE ORDINANCE

<table>
<thead>
<tr>
<th>§</th>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>§ 7</td>
<td>Stormwater Management</td>
<td>87</td>
</tr>
<tr>
<td>§ 7.2</td>
<td>Stormwater Management Standards</td>
<td>87</td>
</tr>
<tr>
<td>§ 7.2.1</td>
<td>Applicability</td>
<td>87</td>
</tr>
<tr>
<td>§ 7.2.2</td>
<td>Standards</td>
<td>87</td>
</tr>
<tr>
<td>§ 7.3</td>
<td>Special Environmental Zone</td>
<td>88</td>
</tr>
<tr>
<td>§ 7.3.1</td>
<td>Findings</td>
<td>88</td>
</tr>
<tr>
<td>§ 7.3.2</td>
<td>Applicability</td>
<td>89</td>
</tr>
<tr>
<td>§ 7.3.3</td>
<td>Referral to Highlands Council Required</td>
<td>89</td>
</tr>
<tr>
<td>§ 7.4</td>
<td>Septic System Design and Maintenance</td>
<td>89</td>
</tr>
<tr>
<td>§ 7.5</td>
<td>Public Water Systems</td>
<td>90</td>
</tr>
<tr>
<td>§ 7.6</td>
<td>Wastewater Collection and Treatment Systems</td>
<td>90</td>
</tr>
<tr>
<td>Article 8</td>
<td>Planned Development Regulations</td>
<td>91</td>
</tr>
<tr>
<td>§ 8.1</td>
<td>Residential Cluster Development</td>
<td>91</td>
</tr>
<tr>
<td>§ 8.1.1</td>
<td>Findings</td>
<td>91</td>
</tr>
<tr>
<td>§ 8.1.2</td>
<td>Applicability</td>
<td>91</td>
</tr>
<tr>
<td>§ 8.1.3</td>
<td>Cluster Project Area Standards</td>
<td>91</td>
</tr>
<tr>
<td>§ 8.1.4</td>
<td>Preservation Set Aside of Cluster Project Area Standards</td>
<td>92</td>
</tr>
<tr>
<td>§ 8.1.5</td>
<td>Development Set Aside of Cluster Project Area Standards</td>
<td>93</td>
</tr>
<tr>
<td>§ 8.1.6</td>
<td>Single-Family Dwelling Area, Yard and Bulk Standards</td>
<td>94</td>
</tr>
<tr>
<td>Article 9</td>
<td>Application Review Procedures &amp; Requirements</td>
<td>97</td>
</tr>
<tr>
<td>§ 9.1</td>
<td>Application Procedures</td>
<td>97</td>
</tr>
<tr>
<td>§ 9.1.1</td>
<td>When Required</td>
<td>97</td>
</tr>
<tr>
<td>§ 9.1.2</td>
<td>Highlands Act Exemptions</td>
<td>97</td>
</tr>
<tr>
<td>§ 9.1.3</td>
<td>Approvals Subject to Compliance</td>
<td>98</td>
</tr>
<tr>
<td>§ 9.1.4</td>
<td>Applications Requiring Prior Highlands Council Approval</td>
<td>99</td>
</tr>
<tr>
<td>§ 9.1.5</td>
<td>Applications Requiring Prior NJDEP Approval</td>
<td>99</td>
</tr>
<tr>
<td>§ 9.1.6</td>
<td>Findings of Compliance</td>
<td>100</td>
</tr>
<tr>
<td>§ 9.2</td>
<td>Applications for Development</td>
<td>102</td>
</tr>
<tr>
<td>§ 9.2.1</td>
<td>Notice &amp; Reporting Requirements</td>
<td>102</td>
</tr>
<tr>
<td>§ 9.2.2</td>
<td>Board Decisions Subject to Highlands Council Call-Up</td>
<td>103</td>
</tr>
<tr>
<td>§ 9.2.3</td>
<td>Conditions of Approval</td>
<td>103</td>
</tr>
<tr>
<td>§ 9.3</td>
<td>Application Fee &amp; Escrow Requirements</td>
<td>104</td>
</tr>
<tr>
<td>§ 9.4</td>
<td>Submission Checklist Requirements</td>
<td>106</td>
</tr>
<tr>
<td>§ 9.4.1</td>
<td>General Requirements</td>
<td>106</td>
</tr>
<tr>
<td>§ 9.4.2</td>
<td>Forest Resources</td>
<td>109</td>
</tr>
<tr>
<td>§ 9.4.3</td>
<td>Highlands Open Waters and Riparian Areas</td>
<td>109</td>
</tr>
<tr>
<td>§ 9.4.4</td>
<td>Steep Slopes</td>
<td>109</td>
</tr>
<tr>
<td>§ 9.4.5</td>
<td>Critical Habitat</td>
<td>110</td>
</tr>
</tbody>
</table>

**DRAFT FOR MUNICIPAL REVIEW**
| § 9.4.6  Carbonate Rock Areas ................................................................. | 110  |
| § 9.4.7  Lake Management Areas .......................................................... | 110  |
| § 9.4.8  Water Conservation and Deficit Mitigation ............................... | 111  |
| § 9.4.9  Prime Ground Water Recharge Areas ....................................... | 111  |
| § 9.4.10 Stormwater Management .......................................................... | 112  |
| § 9.4.11 Wellhead Protection .................................................................. | 113  |
| § 9.4.12 Septic System Design and Maintenance ...................................... | 114  |
| § 9.4.13 Agricultural Resource Areas (ARA) .......................................... | 114  |
| § 9.4.14 Historic Resource Protection .................................................. | 114  |
| § 9.4.15 Scenic Resource Protection ..................................................... | 115  |
| § 9.4.16 Cluster/Conservation Design Development .................................. | 115  |
| § 9.4.17 Low Impact Development ....................................................... | 116  |
| Article 10. Appeals, Waivers, Exceptions .............................................. | 117  |
| § 10.1  Appeals ....................................................................................... | 117  |
| § 10.2  Waivers and Exceptions ............................................................. | 117  |
| § 10.2.1 Highlands Act Waiver Provisions ............................................ | 117  |
| § 10.2.2 Exception Provisions ............................................................... | 117  |
| § 10.2.3 Additional Provisions .............................................................. | 117  |
| Article 11. Enforcement, Violations, Penalties ........................................ | 118  |
| § 11.1  Enforcement ................................................................................ | 118  |
| § 11.2  Inspections ............................................................................... | 118  |
| § 11.3  Administrative Compliance ....................................................... | 118  |
| § 11.4  Penalties ................................................................................... | 118  |
| APPENDIX A. FOREST DETERMINATION .................................................. | 119  |
| APPENDIX B. MAJOR POTENTIAL CONTAMINANT SOURCES .................. | 121  |
| APPENDIX C. MINOR POTENTIAL CONTAMINANT SOURCES .................. | 122  |
| APPENDIX D. MAJOR POTENTIAL POLLUTANT SOURCES ....................... | 123  |
| APPENDIX E. HIGHLANDS ACT PROVISIONS ON AGRICULTURE/HORTICULTURE | 125  |
| APPENDIX F. NJDA HIGHLANDS AGRICULTURAL REGULATIONS ............... | 127  |
| APPENDIX G. EXHIBITS .......................................................................... | 130  |
ARTICLE 1. TITLE, PURPOSE, SCOPE

§ 1.1 SHORT TITLE
This Ordinance shall be known and cited as the “Borough/Township/Town of [Oakland] Highlands Area Land Use Ordinance.”

§ 1.2 PURPOSE
The purpose of this Ordinance is to effectuate the policies, goals and objectives of the Borough/Township/Town Master Plan, in particular the Highlands Element of the Master Plan, while at the same time advancing the purposes of zoning as set forth in the New Jersey Municipal Land Use Law (“MLUL”, N.J.S.A. 40:55D-1 et seq.), addressing the substantive goals and intents of the Highlands Water Protection and Planning Act (“Highlands Act,” N.J.S.A. 13:20-1 et seq.), and satisfying the goals, requirements and provisions of the Highlands Regional Master Plan (RMP).

§ 1.3 SCOPE
The provisions of this Ordinance pertain to the use and development of all lands located within the Borough/Township/Town Highlands Area. The Highlands Area comprises that portion of the municipality for which the applicable provisions of the Borough/Township/Town Master Plan, land use ordinances and other pertinent regulations have been deemed by the New Jersey Highlands Water Protection and Planning Council (“Highlands Council”) to be in conformance with the Highlands RMP. This Ordinance governs land uses, development and redevelopment activities, and management and protection of resources, including but not limited to water resources, natural resources, agricultural resources, scenic resources, and historic, cultural and archaeological resources. The provisions of this Ordinance shall apply in conjunction with all other applicable ordinances, rules and regulations of the municipality. In the event of conflicting or less restrictive alternate provisions, the provisions of this Ordinance shall supersede. [Details as to Ordinance applicability, exclusions and Highlands Act exemptions are provided at Article 2]

§ 1.4 STATUTORY AUTHORITY
This Ordinance is adopted under the authority of the MLUL and the Highlands Act. The Highlands Act provides authorities and responsibilities for municipal planning and development regulation that are complementary to those set forth under the MLUL. The MLUL gives authority to New Jersey municipalities to govern land use and development within their borders. The Highlands Act augments that authority to allow the municipality the power to enforce the goals, policies, objectives and programs of the Highlands RMP. The Highlands Act is designed to protect the natural and agricultural resources of the Highlands through a coordinated system of regional land use controls. The Highlands Act creates a system in which a regional plan is implemented primarily through local government units. The Highlands Act and the RMP together provide the regional perspective from which local decisions and actions will emanate.
§ 1.5  **Severability**
If any section, sentence, clause or phrase of this Ordinance is held to be invalid or unconstitutional by any court of competent jurisdiction, such holding shall in no way affect the validity of the ordinance as a whole, or of any other portion thereof.

§ 1.6  **Effective Date**
This Ordinance shall take effect after final passage and publication in the manner required by law.
ARTICLE 2. APPLICABILITY

§ 2.1 APPLICABILITY
The requirements of the Highlands Area Land Use Ordinance shall apply to the use and development of all lands located within the Borough/Township/Town Highlands Area. Development review provisions shall apply in the case of any project for which a permit or approval from, or a determination by, the municipality is required, including any Application for Development as defined under the MLUL (see Definitions, § 3.2). The provisions of this Ordinance shall apply in conjunction with and as a supplement to the existing Zoning Ordinance, development regulations, and all other rules, codes and regulatory provisions governing the use and development of land in the municipality. In the event of conflicting provisions, the provisions of this Ordinance shall supersede. Where provisions differ only by degree, the more restrictive of the applicable requirements shall supersede.

§ 2.1.1 Exclusions
A. This Ordinance shall not apply to any improvement to a single-family dwelling in lawful existence as of the effective date of this Ordinance, provided that such improvement: a) is related and dedicated solely to the single-family residential use of either the dwelling or the property upon which it is situated; b) results in a cumulative land disturbance of less than one (1) acre, inclusive of all pre-existing disturbances; and c) produces a cumulative impervious surface area of less than one-quarter (¼) acre, inclusive of all pre-existing impervious surface areas.

B. Unless specifically indicated otherwise, and in that case only to the specific extent indicated, the provisions of this Ordinance shall not apply to any application for which a Highlands Preservation Area Approval (defined at § 3.2) has been issued by the New Jersey Department of Environmental Protection.

C. Unless specifically indicated otherwise, and in that case only to the specific extent indicated, the provisions of this Ordinance shall not apply to Agricultural or Horticultural Use and Development (as defined at § 3.2).

§ 2.2 MAJOR HIGHLANDS DEVELOPMENT
Any proposed project, development or activity that meets the definition of a Major Highlands Development (see Definitions, § 3.2) is subject to all applicable requirements and provisions of the New Jersey Department of Environmental Protection (NJDEP) Highlands Water Protection and Planning Act Rules ("NJDEP Preservation Area Rules," N.J.A.C. 7:38-1 et seq.). By definition, such projects, developments and activities pertain solely to the Preservation Area of the Highlands Region. Nothing in this Ordinance shall be construed to waive, obviate, modify or otherwise exempt any covered project, development or activity, or any person(s) proposing or involved in such initiatives, from the provisions of the NJDEP Preservation Area Rules.

§ 2.3 NON-MAJOR HIGHLANDS DEVELOPMENT
Non-Major Highlands Development constitutes any development not defined as a Major Highlands Development. Non-Major Highlands Development includes projects, development and activities in the Planning Area and in the Preservation Area. Any project, development or activity proposed within the Preservation Area or the Planning Area that does not meet the definition of a Major Highlands Development...
shall remain subject to the provisions of this Ordinance, as provided (with specified exclusions) pursuant to § 2.1 above.

§ 2.4  EXEMPTIONS
The activities, improvements and development projects listed below are herewith exempt from the provisions of this Ordinance, as specifically provided by the Highlands Act (at N.J.S.A. 13:20-28). These exemptions apply only to the specific activities, improvements and projects as described and listed herein, and with the exception of the exemption regarding federal military installations (no. 16), shall not be construed to apply across-the-board to any lot, tract or other division of land, whether existing or proposed at the time of passage of the Highlands Act. Neither shall such exemptions be construed to alter, obviate or waive the requirements of any other applicable state or local law, rule, regulation, development regulation or ordinance. Exemptions apply to both the Preservation Area and the Planning Area unless specifically indicated otherwise.

1. The construction of a single family dwelling, for an individual’s own use or the use of an immediate family member, on a lot owned by the individual on the date of enactment of the Highlands Act (August 10, 2004) or on a lot for which the individual entered into a binding contract of sale to purchase on or before May 17, 2004.

2. The construction of a single family dwelling on a lot in existence on the date of enactment of the Highlands Act (August 10, 2004), provided that the construction does not result in the ultimate disturbance of one acre or more of land or a cumulative increase in impervious surface by one-quarter acre or more.

3. A Major Highlands Development that received, on or before March 29, 2004:
   a. One of the following approvals pursuant to the MLUL:
      i. Preliminary or final site plan approval;
      ii. Final municipal building or construction permit;
      iii. Minor subdivision approval where no subsequent site plan approval is required;
      iv. Final subdivision approval where no subsequent site plan approval is required; or
      v. Preliminary subdivision approval where no subsequent site plan approval is required; and
   b. At least one of the following permits from the NJDEP, if applicable to the proposed Major Highlands Development:
      i. A permit or certification pursuant to the “Water Supply Management Act,” P.L.1981, c.262 (C.58:1A-1 et seq.);
      ii. A water extension permit or other approval or authorization pursuant to the “Safe Drinking Water Act,” P.L.1977, c.224 (C.58:12A-1 et seq.);

DRAFT FOR MUNICIPAL REVIEW
-12-
iii. A certification or other approval or authorization issued pursuant to the “The Realty Improvement Sewerage and Facilities Act (1954),” P.L.1954, c.199 (C.58:11-23 et seq.); or

iv. A treatment works approval pursuant to the “Water Pollution Control Act,” P.L.1977, c.74 (C.58:10A-1 et seq.); or

c. One of the following permits from the NJDEP, if applicable to the proposed Major Highlands Development, and if the proposed Major Highlands Development does not require one of the permits listed in subparagraphs (i) through (iv) of subparagraph (b) of this paragraph:

i. A permit or other approval or authorization issued pursuant to the “Freshwater Wetlands Protection Act,” P.L.1987, c.156 (C.13:9B-1 et seq.); or

ii. A permit or other approval or authorization issued pursuant to the “Flood Hazard Area Control Act,” P.L.1962, c.19 (C.58:16A-50 et seq.).

The exemption provided in this paragraph shall apply only to the land area and the scope of the Major Highlands Development addressed by the qualifying approvals pursuant to subparagraphs (a) and (b), or (c) if applicable, of this paragraph, shall expire if any of those qualifying approvals expire; and shall be deemed to have expired if construction beyond site preparation did not commence within three years after the date of enactment of the Highlands Act (August 10, 2004).

4. The reconstruction of any building or structure for any reason within 125% of the footprint of the lawfully existing impervious surfaces on the site, provided that the reconstruction does not increase the lawfully existing impervious surface by one-quarter acre or more. This exemption shall not apply to the reconstruction of any agricultural or horticultural building or structure for a non-agricultural or non-horticultural use.

a. For purposes of this Ordinance, this exemption shall not be construed to permit multiple 125% footprint expansions, but rather, to permit one or more reconstruction activities cumulatively resulting in a maximum 125% increase in the footprint of the impervious surfaces lawfully existing on the site, provided they do not cumulatively exceed the one-quarter acre limitation.

b. For purposes of this Ordinance, the applicable date of lawful existence shall coincide with the date of enactment of the Highlands Act, or August 10, 2004.

c. For purposes of this Ordinance, these provisions shall not be construed to exempt such reconstruction, or the property upon which it occurs, from any other regulations adopted by the municipality, specifically including but not limited to provisions regulating the operation and maintenance of on-site septic systems. Nor shall these provisions be construed to exempt any change in use of such reconstructed building or structure from the applicable provisions of this Ordinance.

5. Any improvement to a single family dwelling in existence on the date of enactment of the Highlands Act (August 10, 2004), including but not limited to an addition, garage, shed, driveway, porch, deck, patio, swimming pool or septic system.
a. For purposes of this Ordinance, this exemption shall be broadly construed to include not only improvements to an existing single family dwelling, but any improvement, alteration, or activity and any disturbance associated with any such improvement, alteration, or activity, involving any portion of the property upon which said dwelling is located, provided that any such modification is associated with and dedicated to the permitted single family residential use of the property. This provision shall not be construed to include improvements, alterations or activities dedicated to any business use or to any accessory dwelling unit(s), and shall not exempt single family dwellings or the properties on which they are situated from any other regulations adopted by the municipality, specifically including but not limited to provisions regulating the operation and maintenance of on-site septic systems.

6. Any improvement, for non-residential purposes, to a place of worship owned by a nonprofit entity, society or association, or association organized primarily for religious purposes, or a public or private school, or a hospital, in existence on the date of enactment of the Highlands Act (August 10, 2004), including but not limited to new structures, an addition to an existing building or structure, a site improvement, or a sanitary facility.

7. An activity conducted in accordance with an approved woodland management plan pursuant to section 3 of the “Farmland Assessment Act,” P.L.1964, c.48 (C.54:4-23.3) or the normal harvesting of forest products in accordance with a forest management plan approved by the State Forester.

8. The construction or extension of trails with non-impervious surfaces on publicly owned lands or on privately owned lands where a conservation or recreational use easement has been established.

9. The routine maintenance and operations, rehabilitation, preservation, reconstruction or repair of transportation or infrastructure systems by a state entity or local government unit, provided that the activity is consistent with the goals and purposes of the Highlands Act and does not result in the construction of any new through-capacity travel lanes.

10. The construction of transportation safety projects and bicycle and pedestrian facilities by a state entity or local government unit, provided that the activity does not result in the construction of any new through-capacity travel lanes.

11. The routine maintenance and operations, rehabilitation, preservation, reconstruction, repair or upgrade of public utility lines, rights of way, or systems, by a public utility, provided that the activity is consistent with the goals and purposes of the Highlands Act.

12. The reactivation of rail lines and rail beds existing on the date of enactment of the Highlands Act (August 10, 2004).

13. The construction of a public infrastructure project approved by public referendum prior to January 1, 2005 or a capital project approved by public referendum prior to January 1, 2005.

14. The mining, quarrying, or production of ready mix concrete, bituminous concrete, or Class B recycling materials occurring or which are permitted to occur on any mine, mine site, or construction materials facility existing on June 7, 2004.

15. The remediation of any contaminated site pursuant to P.L.1993, c.139 (C.58:10B-1 et seq.).
16. Any lands of a federal military installation existing on the date of enactment of the Highlands Act (August 10, 2004) that lie within the Highlands Region.

17. A Major Highlands Development located within an area designated as Planning Area 1 (Metropolitan), or Planning Area 2 (Suburban), as designated pursuant to the “State Development and Redevelopment Plan,” P.L.1985, c.398 (C.52:18A-196 et seq.) as of March 29, 2004, that on or before March 29, 2004 was the subject of a settlement agreement and stipulation of dismissal filed in the Superior Court, or a builder’s remedy issued by the Superior Court, to satisfy the constitutional requirement to provide for the fulfillment of the fair share obligation of the municipality. The exemption provided pursuant to this paragraph shall expire if construction beyond site preparation has not commenced within three years after receiving all final approvals required pursuant to the MLUL.

§ 2.5 EXEMPTION DETERMINATIONS
Any applicant seeking approval of a permit or development application involving any activity, improvement, or development project listed above as a Highlands Act Exemption, shall, as a condition of completeness where applicable, and in any case prior to review of such application by the applicable Board or other municipal authority, provide sufficient proofs, as set forth under § 9.1.2 of this Ordinance, that the proposed activity, improvement, or development project qualifies as a Highlands Act Exemption.

§ 2.6 DEVELOPMENT APPROVALS
Any developer/owner/applicant (as applicable) associated with a development application that has received lawful approval(s) pursuant to the MLUL since the date of enactment of the Highlands Act (August 10, 2004) but prior to the effective date of this Ordinance, shall retain all of the rights and protections accorded and prescribed under the MLUL with regard to such approval(s). These protections shall apply to the specific land area and scope of the approvals granted, in accordance with any conditions attached thereto, subject to the approvals of any applicable state, county or other outside agency having jurisdiction thereon, and shall expire if (and in such event, when) such approval expires. The provisions of this Ordinance shall not be construed to alter or infringe upon such unexpired approvals, and any nonconforming development ultimately resulting from such approvals shall be permitted to continue in accordance with all applicable MLUL provisions concerning nonconforming uses, buildings and structures (pursuant to § 2.7 below).

§ 2.7 NONCONFORMING USES, BUILDINGS AND STRUCTURES
Any nonconforming use, building or structure existing at the time of passage of this Ordinance shall be permitted to continue upon the lot or within the structure it so occupies, and any such structure may be restored or repaired in the event of its partial destruction, in accordance with the provisions of the MLUL and the underlying municipal Zoning Ordinance.
ARTICLE 3. DEFINITIONS

§ 3.1 WORD USAGE
Terms used in the body of this Ordinance which are defined by the Highlands Act are intended to have the same definitions as provided in the Highlands Act. Unless expressly stated to the contrary or alternately defined herein, terms which are defined by the MLUL are intended to have the same meaning as set forth in the MLUL. For purposes of this Ordinance, the terms “shall” and “must” are indicative of a mandatory action or requirement while the word “may” is permissive.

§ 3.2 DEFINITIONS
For purposes of this Ordinance the following definitions shall apply:

**Agricultural or Horticultural Development** – Construction for the purposes of supporting common farmsite activities, including but not limited to, the production, harvesting, grading, packaging, processing, and the wholesale and retail marketing of crops, plants, animals, and other related commodities and the use and application of techniques and methods of soil preparation and management, fertilization, weed, disease, and pest control, disposal of farm waste, irrigation, drainage and water management, and grazing.

**Agricultural or Horticultural Use** – The use of land for common farmsite activities, including but not limited to, the production, harvesting, grading, packaging, processing, and the wholesale and retail marketing of crops, plants, animals, and other related commodities and the use and application of techniques and methods of soil preparation and management, fertilization, weed, disease, and pest control, disposal of farm waste, irrigation, drainage and water management, and grazing.

**Agricultural Impervious Cover** – Agricultural or horticultural buildings, structures or facilities with or without flooring, residential buildings and paved areas, but not meaning temporary coverings.

**Applicant** – Any entity applying to the Board of Health, Planning Board, Zoning Board of Adjustment, Zoning Officer, Construction Official or other applicable authority of the municipality for permission or approval to engage in an activity that is regulated by the provisions of this Ordinance.

**Application for Development** – The application form and all accompanying documents required by ordinance for approval of a subdivision plat, site plan, planned development, conditional use, zoning variance, or direction of the issuance of a permits pursuant to section 25 or section 27 of P.L.1975, c.291 (C.40:55D-34 or C.40:55D-36).

**Aquifer** – A geologic formation, group of formations, or partial formation containing saturated permeable rock, sand or gravel sufficient to store and transmit usable quantities of water to wells and springs.

**Archaeological Resources** – Any material remains of past human life or activities which are of archaeological interest, such as tools, structures or portions of structures, pit houses, rock paintings, rock carvings, intaglios, graves, human skeletal materials, or any portion or piece of any of the foregoing items.
Best Management Practices (BMP) – Structural or nonstructural methods used to prevent or reduce the movement of sediment, nutrients, pesticides and other pollutants from the land to surface or ground water.

CADB – County Agriculture Development Board

Carbonate Rock – Rock consisting chiefly of calcium and magnesium carbonates, such as limestone and dolomite.

Clear-Cutting – A forestry or logging practice in which most or all of the trees in a harvest area are cut down; a pre-development site preparation activity, in which all or most of the trees in a development area are cut down or otherwise removed.

Cluster/Conservation Design Development – A development design technique where principal buildings and structures are grouped together on a portion of the Cluster Project Area, while the remaining land area is permanently deed-restricted in agricultural use, for conservation of environmental resources, or as open space for environmental protection including public recreational use.

Cluster/Conservation Design Development Guidelines – Guidelines for cluster/conservation design development provided by the Highlands Council to guide municipalities in implementing cluster development projects and in assisting in local development review and Highlands Project Review.

Cluster of Domestic Wells – A grouping of wells providing potable water supplies to individual homes, with either: 5 homes on lots that cumulatively contain less than or equal to 2.5 acres; or 25 homes on lots that cumulatively contain less than or equal to 25 acres. Groups of domestic wells that otherwise meet these thresholds but have a linear configuration (e.g., stretched along a road, not in a cluster) shall not constitute a Cluster of Domestic Wells.

Cluster Project Area – All of the individual parcels from which development is clustered including the area set aside for preservation and the area set aside for development.

Community Based On-Site Wastewater Facilities – Sanitary sewerage treatment facilities (i.e., domestic treatment works) that discharge treated wastewater to ground waters as regulated by a NJPDES permit under N.J.A.C. 7:14, which provide service to one or more parcels that are approved and constructed as a single development or planned development.

Conditional Water Availability – The amount of water availability allowed in a deficit HUC14 subwatershed, subject to certain mitigation requirements, as determined by the Highlands Council.

Consumptive Water Use – Any use of water that results in its evaporation, transpiration, incorporation into products or crops, consumption by humans or animals, or removal by any other means from a watershed or subwatershed, other than by conveyances as untreated water supply, potable water, or wastewater.

Contaminant – A substance capable of causing contamination of a water supply.

Contamination – The presence of any harmful or deleterious substances in the water supply, including but not limited to hazardous substances, hazardous wastes, and substances listed in the New Jersey Administrative Code at N.J.A.C. 7:9C (Ground Water Quality Standards), N.J.A.C. 7:9B (Surface Water Quality Standards).
Quality Standards) and N.J.A.C. 7:10 (NJ Safe Drinking Water Act Regulations), and as these regulations may be amended from time to time.

**Cultural Resources** – Sites, artifacts, or materials that relate to the way people live or lived, for example, archaeological sites, rock carvings, ruins, and the like. These resources are generally defined based on existing documentation or artifacts discovered relating to activities of people who lived, worked, or recreated in an area during a period in history.

**Current Deficit Area** – A HUC14 subwatershed characterized by negative Net Water Availability, meaning that existing consumptive and depletive water uses exceed the capacity of the ground water supply to sustain them.

**Deforestation** – The conversion of forested areas to non-forested areas, whether for use as urban land, pasture or any other non-forest land use; disturbance of an area characterized as “forest” pursuant to the procedures provided in APPENDIX A, herein, the extent or effect of which is to disqualify the area from such designation.

**Depletive Water Use** – Use of water whereby it is withdrawn from a HUC14 subwatershed and transported outside of the subwatershed (through utility conveyances as untreated water supply, potable water, or wastewater), resulting in a net loss of water to the subwatershed from which it originated.

**Density** – The permitted number of dwelling units per gross acre of land to be developed; or if defined by the underlying municipal Zoning Ordinance, as provided therein.

**Density, Septic System** – The gross acreage of land area required per individual septic system to physically contain and support its functions in keeping with the specified wastewater design flow.

**Development** – The division of a parcel of land into two or more parcels, the construction, reconstruction, conversion, structural alteration, relocation, or enlargement of any building or other structure, or of any mining excavation or landfill, and any use or change in the use of any building or other structure, or land or extension of use of land, for which permission may be required pursuant to the MLUL.

**Development Set Aside of Cluster Project Area** – All of the individual parcels within the area set aside for residential development including the infrastructure, open space, and utilities necessary to support the development pursuant to the requirements of § 8.1.5.

**Discharge** – Any intentional or unintentional action or omission, unless pursuant to and in compliance with the conditions of a valid and effective federal or state permit, resulting in the releasing, spilling, pumping, pouring, emitting, emptying or dumping of a hazardous substance into the waters or lands of the state or into waters outside the jurisdiction of the state when damage may result to the lands, waters or natural resources within the jurisdiction of the state.

**Dissolution** – A space or cavity in or between rocks, formed by the solution of part of the rock material.

**Disturbance** – The placement of impervious surface, the exposure or movement of soil or bedrock, or the clearing, cutting, or removing of vegetation.

**Endangered Species** – Species included on the list of endangered species that the NJDEP promulgates pursuant to the Endangered and Nongame Species Conservation Act, N.J.S.A. 23:2A-13 et seq., and the Endangered Plant Species List Act, N.J.S.A. 13:1B-15.151 et seq., and any species or subspecies of

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**DRAFT FOR MUNICIPAL REVIEW**

-18-
wildlife appearing on any federal endangered species list or any species or subspecies of plant designated as listed, proposed, or under review by the federal government pursuant to the Endangered Species Act of 1973, 16 U.S.C. §§ 1531 et seq.

**Existing Area Served (EAS)** – An area provided with physical connection(s) to either an existing public wastewater collection system or a public water distribution system where all such infrastructure is fully constructed and operational. An EAS does not include a designated sewer service area or water service franchise area where collection, transmission or distribution systems do not currently exist. Neither does an EAS include a property having access but not physically connected to such infrastructure.

**Existing Constrained Areas** – Stream flows within any HUC14 subwatershed(s) upstream of a Current Deficit Area.

**Farm Conservation Plan** – A site-specific plan that prescribes needed land treatment and related conservation and natural resource management measures, including forest management practices, that are determined to be practical and reasonable for the conservation, protection, and development of natural resources, the maintenance and enhancement of agricultural or horticultural productivity, and the control and prevention of non-point source pollution.

**Farm Management Unit** – A parcel or parcels of land, whether contiguous or noncontiguous, together with agricultural or horticultural buildings, structures and facilities, producing agricultural or horticultural products, and operated as a single enterprise.

**Farmland Soils, Important** – Soils based on soil data prepared by the USDA NRCS including the following four classifications: Prime Farmland Soils, Farmland Soils of Statewide Importance, Unique Farmland Soils, and Farmland Soils of Local Importance.

**Farmland Soils of Local Importance** – Farmland of local importance includes those soils that are not prime or of statewide importance and are used for the production of high value food, fiber or horticultural crops.

**Farmland Soils, Prime** – Prime Farmlands include all those soils in NRCS Land Capability Class I and selected soils from Land Capability Class II. Prime Farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber and oilseed crops and is also available for these uses. It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed according to acceptable farming methods. Prime Farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding.

**Farmland Soils of Statewide Importance** – Farmlands of statewide importance include those soils in NRCS Land Capability Class II and III that do not meet the criteria as Prime Farmland. These soils are nearly Prime Farmland and economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce yields as high as Prime Farmland if conditions are favorable.

**Farmland Soils, Unique** – Soils used for special crops (such as cranberries in the New Jersey Pinelands). Unique soils are determined on a statewide basis by the State Soil Conservation Committee.

**Farmsite** – A Farm Management Unit as defined above.
**Floor Area** – The area of each floor of a building lying within the inside perimeter of its exterior walls excluding vent shafts, courts, and unfinished areas such as basements or attics having ceiling heights less than that required for habitable space under the building code; floor areas not provided with surrounding exterior walls shall be included to the extent of the usable area within the horizontal projection of the roof or floor above.

**Floor Area Ratio** – The sum of the area of all floors of buildings or structures compared to the total area of the site; or if defined by the underlying Zoning Ordinance, as provided therein.

**Forest** – A biological community as determined by the method set forth under APPENDIX A, as adapted from NJDEP Preservation Area Rules, at N.J.A.C. 7:38-3.9.

**Forest Area, Upland** – A biological community that is a “forest,” as defined above, and that is not located in an area designated as Highlands Open Waters (i.e., not a forested wetland or other Highlands Open Waters).

**Forest Area, Total** – The percentage of total area that is covered in forest.

**Forest, Core** – The area and percent of a forest patch that is greater than 300 feet from a forest edge.

**Forest Integrity** – An expression of the application of landscape metrics to evaluate the effects of forest fragmentation across the landscape, thereby recognizing the ability of forests to provide essential ecosystem functions.

**Forest Patch** – A contiguous tract of forest bordered by either altered land or a road.

**Forest Patch, Mean Distance to Closest (MDCP)** – The shortest edge-to-edge distance between distinct forest patches within a 1,000-foot search radius. The MDCP provides a measure of forest patch isolation within the landscape area of interest.

**Forest Management Plan** – A written guidance document describing the forest resources present on a property, the landowner’s management goals and objectives, and the recommended practices or activities to be carried out over time on the land. This tool is used to evaluate a forest land’s current state and provide a management process which, over time, meets the landowner’s objectives, while maintaining health and vigor of the resource. Forest Management Plans are typically written for a ten year period.

**Ground Water** – Water contained in the interconnected voids of a saturated zone in the ground. A saturated zone is a volume of ground in which the voids in the rock or soil are filled with water greater than or equal to atmospheric pressure.

**Ground Water Availability** – The total amount of water assigned by the Highlands Council to a HUC14 subwatershed that can be used for consumptive and depletive water uses by water uses that do not draw from water supplies with a NJDEP-approved safe yield.

**Habitat Value** – The value of an ecosystem area for maintenance of a healthy population of a species as determined by quantity, quality, type, and function.

**Hazardous Substance** – Any substance designated under 40 CFR 116 pursuant to Section 311 of the Federal Water Pollution Control Act Amendments of 1972 [Clean Water Act] (Public Law 92-500; 33

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**DRAFT FOR MUNICIPAL REVIEW**
Hazardous Waste – Any solid waste that is defined or identified as a hazardous waste pursuant to the Solid Waste Management Act, N.J.S.A. 13:1E et seq., N.J.A.C. 7:26-8, or 40 CFR Part 261.

Highlands Applicability Determination – The determination made by the NJDEP of whether a project proposed for the Preservation Area is a major Highlands development, whether any such major Highlands development is exempt from the Highlands Act, and whether the project is consistent with the applicable areawide water quality management plan.

Highlands Area – That portion of the municipality for which the land use planning and regulation are in conformance with, or are intended or proposed to be in conformance with, the Highlands RMP.

Highlands Historic and Cultural Resource Inventory – The listing of historic, cultural and archaeological resources within the Highlands Region, including but not limited to: all properties listed on the New Jersey or National Register of Historic Places; all properties which have been deemed eligible for listing on the New Jersey or National Register of Historic Places; and all properties for which a formal opinion of the State Historic Preservation Office (SHPO) has been issued.

Highlands Open Waters – All springs, streams including intermittent streams, wetlands, and bodies of surface water, whether natural or artificial, located wholly or partially within the boundaries of the Highlands Region, but not including swimming pools.

Highlands Open Waters Buffer – In the Preservation Area, a 300-foot buffer adjacent to Highlands Open Waters in which no disturbance is permitted, except as provided in N.J.A.C. 7:38-3.6. In the Planning Area, a 300-foot buffer around all Highlands Open Waters from the edge of the discernible bank of the Highlands Open Waters feature, or from the centerline of that feature where no discernible bank exists. With respect to wetlands and other Highlands Open Waters features, the feature shall include a protection buffer of 300 feet, measured from the mapped wetlands delineated in a Letter of Interpretation or Highlands Resource Area Determination, as applicable, as provided by NJDEP.

Highlands Preservation Area Approval (HPAA) – A permit to engage in a regulated activity in the Highlands Preservation Area issued by the NJDEP pursuant to the Highlands Act and the NJDEP Highlands Water Protection and Planning Act Rules (N.J.A.C. 7:38), including an HPAA that contains a waiver pursuant to N.J.S.A. 13:20-33b. Highlands Preservation Area Approval includes Highlands general permits issued pursuant to N.J.S.A. 13:20-33d and promulgated at N.J.A.C. 7:38-12. HPAA, when used in this Ordinance, includes Highlands general permits unless explicitly excluded.

Highlands Public Community Water Supply System – Public water supply systems in the Highlands Region that pipe water for human consumption to at least 15 service connections or that regularly serve at least 25 year-round residents.

Highlands Redevelopment Area – A property, portion of a property, or group of properties designated as such by the Highlands Council and which includes one or more of the following: a) a brownfield site; b) a grayfield site; and c) any previously developed site in the Highlands Area. A Highlands Redevelopment Area may include the intervening or surrounding lands which are significantly affected by or necessary to
support such sites, and is subject to a Highlands Council-approved redevelopment plan setting forth the scope and details of any redevelopment project(s) and/or activities permitted to occur.

**Highlands Scenic Resource Inventory** – The inventory of regionally significant lands within the Highlands Region that encompasses elements of high scenic quality worthy of protection, as approved by the Highlands Council.

**Historic District** – One or more historic sites and intervening or surrounding property significantly affecting or affected by the quality and character of the historic site or sites.

**Historic Resources** – Buildings, structures, objects, districts, sites, or areas that are significant in the history, architecture, archaeology, engineering or culture of a place or time.

**Historic Site** – Any real property, man-made structure, natural object or configuration of any portion or group of the foregoing of historical, archaeological, cultural, scenic, or architectural significance.

**HUC** – Hydrologic Unit Code; identification number developed by the USGS to designate drainage basins including watersheds and subwatersheds.

**HUC14 Subwatershed** – A delineated subwatershed area identified by a 14-digit HUC, within which water drains to a particular receiving surface water body.

**Impervious Surface** – Any structure, surface, or improvement that reduces or prevents absorption of stormwater into land, including, but not limited to, porous paving, paver blocks, gravel, crushed stone, decks, patios, elevated structures, and other similar structures, surfaces, or improvements.

**Individual Subsurface Sewage Disposal System** – A system regulated under N.J.A.C. 7:9A for disposal of sanitary sewage into the ground which is designed and constructed to treat sanitary sewage in a manner that will retain most of the settleable solids in a septic tank and to discharge the liquid effluent to a disposal field. The term “septic system” is equivalent in meaning.

**Karst** – A distinctive topography that indicates solution of underlying carbonate rocks (such as limestone and dolomite) by surface water or ground water over time, often producing surface depressions, sinkholes, sinking streams, enlarged bedrock fractures, caves, and underground streams.

**Light Detection and Ranging** (LiDAR) – Technology that uses an active sensor, similar to radar that transmits laser pulses to a target and records the time it takes for the pulse to return to the sensor receiver. This technology is used for high-resolution topographic mapping.

**Linear Development** – Infrastructure, utilities and the associated right-of-ways therefor, including but not limited to such installations as railroads, roads, sewerage and water supply pipelines, stormwater management pipes and channels, natural gas and liquid fuel pipelines, electric, telephone and other transmission lines, and in all cases, the associated right-of-ways therefor.

**Low Impact Development** – An environmentally sensitive approach to land use planning that uses a variety of landscape and design techniques to manage development activities to mitigate potential adverse impacts on the natural environment.

**Major Highlands Development** – Except as otherwise provided pursuant to subsection a. of section 30 of the Highlands Act (“Exemptions”): (1) any non-residential development in the Preservation Area; (2)
any residential development in the Preservation Area that requires an environmental land use or water permit from the NJDEP or that results in the ultimate disturbance of one acre or more of land or a cumulative increase in impervious surface by one-quarter acre or more; (3) any activity undertaken or engaged in the Preservation Area that is not a development but results in the ultimate disturbance of one-quarter acre or more of forested area or that results in a cumulative increase in impervious surface by one-quarter acre or more on a lot; or (4) any capital or other project of a state entity or local government unit in the Preservation Area that requires an environmental land use or water permit from the NJDEP or that results in the ultimate disturbance of one acre or more of land or a cumulative increase in impervious surface by one-quarter acre or more. Major Highlands Development shall not include any agricultural or horticultural development or agricultural or horticultural use.

Major Potential Contaminant Sources (PCS) – Land uses and activities determined by the Highlands Council to pose a major risk of ground water contamination (see APPENDIX B).

Minor Potential Contaminant Sources (PCS) – Land uses and activities determined by the Highlands Council to pose a minor risk of ground water contamination (see APPENDIX C).


NJDA – New Jersey Department of Agriculture

NJDA Agricultural Development in the Highlands Rules – The regulations established by the NJDA to implement requirements of the Highlands Act, titled and codified at N.J.A.C. 2:92.

NJDEP – New Jersey Department of Environmental Protection

NJDEP Preservation Area Rules – The regulations established by the NJDEP to implement requirements of the Highlands Act, titled “Highlands Water Protection and Planning Act Rules,” and codified at N.J.A.C. 7:38-1 et seq.

NJDOT – New Jersey Department of Transportation

NJPDES – New Jersey Pollutant Discharge Elimination System

NJPDES Permit – A permit issued by the NJDEP authorizing certain discharges to ground or surface waters of the State of New Jersey pursuant to the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., as amended, and its implementing rules at N.J.A.C. 7:14A.


Nonconforming Lot – Any lot having an area, dimension or location which was lawful prior to the adoption, revision or amendment of a zoning ordinance, but which fails to conform to the requirements of the zoning district in which it is located by reason of such adoption, revision or amendment.

Nonconforming Structure – Any structure having a size, dimension or location which was lawful prior to the adoption, revision or amendment of a zoning ordinance, but which fails to conform to the requirements of the zoning district in which it is located by reason of such adoption, revision or amendment.
Nonconforming Use — A use or activity which was lawful prior to the adoption, revision or amendment of a zoning ordinance, but which fails to conform to the requirements of the zoning district in which it is located by reason of such adoption, revision or amendment.

Non-Public Well — Any water supply well used for potable purposes other than a public community or non-community water supply well.

Non-Structural Management — Techniques and practices devised to manage stormwater runoff and reduce pollution levels, without extensive construction efforts. Non-structural management strategies often mimic the natural hydrology of a site and utilize site planning and design to accomplish stormwater control.

NRCS — Natural Resources Conservation Service of the United States Department of Agriculture

Operations and Contingency Plan — A plan submitted to and approved by the Board of Health (or equivalent designated authority) regarding an existing or proposed Major or Minor Potential Contaminant Source (PCS), that: a) documents the specific PCS(s) existing or proposed for the site; b) describes the types and quantities of substances and/or wastes expected to be used, discharged or stored on the site; c) indicates the means by which spillage, leakage or discharge of such materials will be prevented; d) provides the means or methods to be used to contain or remedy any accidental spill, leak, discharge or migration of such materials from the site directly or indirectly into ground water, surface water bodies, or the land surfaces that provide recharge to the underlying aquifer; e) indicates the procedures to be undertaken to notify the appropriate administrative authorities, including but not limited to the NJDEP and the Board of Health, regarding any accidental spillage or discharge of such materials; and f) demonstrates that best management practices have been incorporated into the design and management of both the site and the particular PCS(s) it contains to ensure against such discharges.

Person — Any individual, public or private corporation, company, partnership, firm, association, owner or operator, political subdivision of this State, and any state, federal or interstate agency or an agent or employee thereof.

Planning Area — Lands within the Highlands Region that are not located in that portion designated by the Highlands Act as the “Preservation Area” (see metes and bounds description at N.J.S.A. 13:20-7b). For purposes of this Ordinance, this terminology shall also be used to refer to Planning Area lands located solely within the Borough/Township/Town.

Potential Contaminant Source (PCS) — Activity or land use that may be a source of a contaminant that has the potential to move into ground water withdrawn from a well.

Preservation Area — Lands within the Highlands Region that are located in that portion designated by the Highlands Act as the “Preservation Area” (see metes and bounds description at N.J.S.A. 13:20-7b). For purposes of this Ordinance, this terminology shall also be used to refer to Preservation Area lands located solely within the Borough/Township/Town.

Preservation Set Aside of Cluster Project Area — All of the individual parcels within the area set aside for preservation that must be deed-restricted against further subdivision pursuant to the requirements of § 8.1.4.

Public Community Water System — A public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year round residents.
Public Community Well – A well that provides water to a public water system serving at least 15 service connections used by year-round residents or regularly serving at least 25 year-round residents.

Public Non-Community Water System – A public water system that is not a public community water system and is either a “public non-transient non-community water system” or a “public transient non-community water system” as defined herein.

Public Non-Community Well – A well that is not a public community well and that provides water to a public water system regularly serving at least 25 individuals for at least 60 days in any given calendar year.

Public Non-Transient Non-Community Water System – A public water system that is not a public community water system and that regularly serves at least 25 of the same persons for more than six months in any given calendar year.

Public Transient Non-Community Water System – A public water system that is not a public community or a public non-transient non-community water system and that serves at least 25 transient individuals for at least 60 days in any given calendar year.

Public Water System – A system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves at least 25 individuals daily for at least 60 days out of the year. Such term includes any collection, treatment, storage and distribution facilities under control of the operator of such system and used primarily in connection with such system, and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. A public water system is either a “public community water system” or a “public non-community water system” as defined herein.

Rare Species – Wildlife species that are not endangered or threatened wildlife species but are considered by the NJDEP to be species of special concern as determined by a panel of experts, or that are ranked S1 (critically imperiled in New Jersey because of extreme rarity), S2 (imperiled in New Jersey because of rarity), S3 (rare in New Jersey), G1 (critically imperiled globally), G2 (imperiled globally because of rarity) or G3 (globally very rare and local throughout its range or found locally in a restricted range) in the Natural Heritage Database, and Plant Species of Concern listed pursuant to N.J.A.C. 7:5C-3.1.

Reforestation – The restoration (replanting) of a forest that has been reduced by fire, cutting, or any other cause.

Resource Management System Plan – A site-specific conservation system plan that: (1) prescribes needed land treatment and related conservation and natural resource management measures, including forest management practices, for the conservation, protection, and development of natural resources, the maintenance and enhancement of agricultural and horticultural productivity, and the control and prevention of non-point source pollution; and (2) establishes criteria for resources sustainability of soil, water, air, plants, and animals.

Reviewing Board – The municipal Planning Board or Zoning Board of Adjustment, as applicable, established pursuant to N.J.S.A. 40:55D-23 or N.J.S.A. 40:55D-69 respectively, or any committee formally designated and authorized to act on behalf of such Board pursuant to other provisions of the MLUL (e.g., Minor Subdivision Committee of a Planning Board).
Riparian Area – Flood prone areas, wetlands, soils that are hydric, alluvial, or have a shallow depth to ground water, and wildlife passage corridors that are associated with Highlands Open Waters, as described in the municipal master plan and Environmental Resource Inventory.

Riparian Area, Flood Prone Portion – NJDEP documented and undocumented flood prone areas and Federal Emergency Management Agency (FEMA) 100-year floodplain.

Riparian Soils – Hydric soil, soil exhibiting a shallow depth to seasonal high water table, or alluvial soil.

Riparian Area Wildlife Corridor – A 300-foot corridor on each mapped stream bank or from the stream centerline if no stream bank is mapped.

Riparian Area Integrity Score – The value (High, Moderate, Low) of Highlands Riparian Areas within each Highlands HUC14 subwatershed as established by the Highlands Council through an analysis of the relative amount of impervious cover, agricultural land use, density of roadway stream-crossings, vegetative condition, and habitat for wetland/water-dependent, threatened, and endangered wildlife species of the Riparian Areas.

SADC – State Agriculture Development Committee

SCD – Soil Conservation District, as established in accordance with the Soil Conservation Act, N.J.S.A. 4:24-1 et seq.

Scenic Resources – Sites and landscapes that are distinctive and remarkable for their geology, topography, history, culture, and aesthetics or can be representative of the defining character of a community. They may include prominent ridgelines, mountainsides or hillsides, panoramic vistas, community gateways and landmarks, river valleys, and agricultural landscapes.

Sedimentation – The process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water).

Septic System – A system regulated by N.J.A.C. 7:9A for disposal of sanitary sewage into the ground which is designed and constructed to treat sanitary sewage in a manner that will retain most of the settleable solids in a septic tank and to discharge the liquid effluent to a disposal field. The term “Individual Subsurface Sewage Disposal System” is equivalent in meaning.

Shoreline – The Ordinary High Water Mark, or point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristic.

SIC – Standard Industrial Classification

Site Disturbance – The placement of impervious surface, the exposure or movement of soil or bedrock, or the clearing, cutting, or removing of vegetation.

Slope (or “Grade”) – An area of land forming an incline; a measure used to describe the degree of inclination of an area of land; the difference in vertical elevation (“rise”) of a land area occurring over a specified horizontal distance (“run”). For example, a land area having a one (1)-foot vertical rise over a 10-foot horizontal run, has a slope of 10%. A 10-foot vertical rise over a 25-foot horizontal run indicates a slope of 40%.
MODEL HIGHLANDS AREA LAND USE ORDINANCE

Slope, Steep – Any slope having a grade of 15% or more, or if situated in a Riparian Area, of 10% or more.

Slopes, Constrained – All non-Riparian Area lands having a slope of 15% to less than 20% which are non-forested and exhibit one or more of the following characteristics: a) highly susceptible to erosion; b) shallow depth to bedrock; or c) a Soil Capability Class indicative of wet or stony soils.

Slopes, Limited Constrained – All non-Riparian Area lands having a slope of 15% to less than 20%, which are non-forested, are not highly susceptible to erosion, and do not have a shallow depth to bedrock or a Soil Capability Class indicative of wet or stony soils.

Slopes, Moderately Constrained – All forested non-Riparian Area lands having a slope of 15% to less than 20%.

Slopes, Severely Constrained – All lands having slopes of 20% or greater and all lands within Riparian Areas having slopes of 10% and greater.

Species of Special Concern – Wildlife species identified by the NJDEP that warrant special attention because of evidence of population decline or inherent vulnerability to environmental deterioration or habitat modification that would result in the species becoming threatened if conditions surrounding the species begin or continue to deteriorate. The term includes species for which there is little knowledge of current population status in the state.

Stormwater Management Rules – NJDEP rules at N.J.A.C. 7:8 that set forth the required components of regional and municipal stormwater management plans, and establish the stormwater management design and performance standards for new (proposed) development.

Structure – A combination of materials to form a construction for occupancy, use or ornamentation whether installed on, above, or below the surface of a parcel of land.

Subsidence Sinkholes – Sinkholes formed by the downward settlement of unconsolidated overburden into openings in underlying, soluble bedrock.

Surface Water – Any waters of the State of New Jersey which are not ground water.

Sustainable Agriculture – An integrated system of plant and animal production practices having a site-specific application that will over the long-term: (a) satisfy human food and fiber needs; (b) enhance environmental quality and the natural resource base upon which the agricultural economy depends; (c) make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles, and controls; (d) sustain the economic viability of farm operations; and (e) enhance the quality of life for farmers and society as a whole (1990 Farm Bill).

Technical Service Provider (TSP) – Professionals from outside of the United States Department of Agriculture that are certified by the NRCS to assist agricultural producers in applying conservation measures.


DRAFT FOR MUNICIPAL REVIEW

-27-
Time of Travel – The average time that a volume of water will take to travel through the zone of saturation from a given point to a pumping well.

Total Maximum Daily Load (TMDL) – The pollutant loading that a surface water body may assimilate without violating NJDEP Surface Water Quality Standards (N.J.A.C. 7:9B) and a determination of the extent to which pollutant loadings to a water body must be reduced to restore that water body to a water quality that complies with the Surface Water Quality Standards. A TMDL includes an allocation of allowable pollutant loads to specific point sources (Wasteload Allocations) and categories of non-point sources (Load Allocations), after subtraction of a Margin of Safety and, where appropriate, a Reserve Capacity (for future pollutant loads).

Viewshed – An area of land, water or other physical features visible from a fixed vantage point.

Wastewater Utility – A publicly, privately, or investor-owned utility that collects and may treat sanitary wastewater, as regulated by the NJDEP.

Water Availability, Conditional – The amount of water availability allowed in a deficit HUC14 subwatershed, subject to certain mitigation requirements, as determined by the Highlands Council.

Water Availability, Net – The value assigned by the Highlands Council to a HUC14 subwatershed resulting from subtracting consumptive and depletive surface and ground water uses from ground water availability.

Water Conservation – Implementation of BMPs to ensure maximum water use efficiency and reduction in water use and losses; measures may include low impact development techniques, water conserving fixtures, water valves, beneficial re-use systems and capture of stormwater.


Water Use and Conservation Management Plan – A planning document approved by the Highlands Council to ensure the sound use and management of water resources. Water Use and Conservation Management Plans document the current state of water availability and use in the subwatersheds of interest, set priorities for the use and protection of available water, and establish methods to reduce and, where feasible, eliminate net water availability deficits where they exist.

Wellhead – The well, borehole, and appurtenant equipment for a public community well, public non-community well, or non-public well within a cluster of non-public wells.

WHPA – Wellhead Protection Area

Zone of Saturation – A layer within or below the soil profile which is saturated with ground water either seasonally or throughout the year.
ARTICLE 4.  ESTABLISHMENT OF HIGHLANDS AREA DISTRICTS

§ 4.1  HIGHLANDS PRESERVATION AREA AND PLANNING AREA
The Highlands Act establishes the Preservation Area and Planning Area of the Highlands Region. It describes the varied attributes of each and sets forth the major land use planning goals that pertain to the lands located within each. The Act defines the geographic extent of the Highlands Region to include the aggregated land area making up its constituent municipalities (N.J.S.A. 13:20-7a). It provides a physical delineation of the Preservation Area by use of a specific metes and bounds description (N.J.S.A. 13:20-7b), designating all remaining lands within the Highlands Region as the Planning Area.

§ 4.1.1 Highlands Area
The Borough/Township/Town Master Plan incorporates the Highlands Preservation Area and Planning Area, inclusive of the goals applicable to each, as an integral component of the planning and land use policies of the municipality. For purposes of this Ordinance, these Areas shall henceforth be known and designated as the Borough/Township/Town Highlands Area.

§ 4.1.2 Preservation Area
The Preservation Area, to the full extent of its limits within the Borough/Township/Town Highlands Area, is herewith adopted and established as an overlay to municipal zoning.

§ 4.1.3 Planning Area
The Planning Area, to the full extent of its limits within the Borough/Township/Town Highlands Area, is herewith adopted and established as an overlay to municipal zoning.

§ 4.2  HIGHLANDS ZONES AND SUB-ZONES
The Highlands RMP establishes three primary zones (the Protection Zone, Conservation Zone and Existing Community Zone) and four sub-zones (Wildlife Management Sub-Zone, Conservation Zone–Environmentally Constrained Sub-Zone, Existing Community Zone–Environmentally Constrained Sub-Zone and Lake Community Sub-Zone) each with its own purpose, application and development criteria. Delineation of Highlands Zones finds basis in the underlying natural resources, the extent of existing development and supporting infrastructure, and the potential to support new development and redevelopment. Highlands Zones are intended to ensure that the density and intensity of future development and redevelopment do not exceed the capacity of the land, natural resources and existing infrastructure to support them. The Borough/Township/Town Master Plan incorporates the Highlands zones and sub-zones as an integral component of the planning and land use policies of the municipality.

In keeping with the Land Use Plan of the Borough/Township/Town Master Plan, the following Highlands Zones and Sub-Zones are herewith established as overlays to municipal zoning:

§ 4.2.1 Protection Zone
The Protection Zone contains the highest quality natural resource value lands of the Highlands Area. Lands in the Protection Zone are essential to maintaining water quality, water quantity and sensitive ecological resources and processes and have limited or no capacity to support human development without adversely affecting overall ecological function. Land acquisition is a high priority for lands in the Protection Zone and development activities will be extremely limited. Any development will be subject to stringent limitations on consumptive and depletive water use, degradation of water quality, and impacts to environmentally sensitive lands and natural resources.
§ 4.2.2 Wildlife Management Sub-Zone
The Wildlife Management Sub-Zone, a sub-zone of the Protection Zone, consists of areas managed by the United States Fish and Wildlife Service as part of the National Wildlife Refuge System, and lands within the Wildlife Management Area System administered by the NJDEP Division of Fish & Wildlife's Bureau of Land Management. These areas are part of a network of lands and waters for conservation, management, and where appropriate, restoration of fish, wildlife and plant resources and their habitats. Lands within the Wildlife Management Sub-Zone are intended for compatible wildlife-dependent recreational uses such as hunting, fishing, wildlife observation and photography, and environmental education and interpretation.

§ 4.2.3 Conservation Zone
The Conservation Zone consists of areas with significant agricultural lands interspersed with associated woodlands and environmental features that should be preserved when possible. The Conservation Zone is intended primarily for agricultural use and development, including ancillary and supporting uses and activities. Non-agricultural development activities will be limited in area and intensity due to infrastructure constraints and resource protection goals. Where non-agricultural development does occur it must be compatible with agricultural uses.

§ 4.2.4 Conservation Zone – Environmentally Constrained Sub-Zone
The Conservation Zone–Environmentally Constrained Sub-Zone consists of lands containing significant environmental features within the Conservation Zone that should be preserved and protected from non-agricultural development. Development activities will be limited and subject to stringent limitations on consumptive and depletive water use, degradation of water quality, and impacts to environmentally sensitive lands.

§ 4.2.5 Existing Community Zone
The Existing Community Zone consists of areas of concentrated development representing existing communities. These areas tend to have limited environmental constraints due to previous development patterns, and may have existing infrastructure that can support additional development or redevelopment. Where served by adequate supporting infrastructure, lands within the Existing Community Zone are suited to higher densities and intensities of development than other Zones.

§ 4.2.6 Existing Community Zone – Environmentally Constrained Sub-Zone
The Existing Community Zone–Environmentally Constrained Sub-Zone consists of significant contiguous Critical Habitat, steep slopes and forested lands within the Existing Community Zone that should be protected from further fragmentation. They serve as regional habitat “stepping stones” to larger contiguous Critical Habitat and forested areas. As such, they are not appropriate for significant development, and are best served by land preservation and protection. Development is subject to stringent limitations on consumptive and depletive water use, degradation of water quality, and impacts to environmentally sensitive lands.

§ 4.2.7 Lake Community Sub-Zone
The Lake Community Sub-Zone consists of that portion of the Existing Community Zone that lies within 1,000 feet of all lakes of 10 acres or more in surface area. The purpose for the sub-zone is to protect and enhance water quality, resource features, shoreline recreation, scenic quality, and community character. This sub-zone incorporates unique regulatory requirements to prevent degradation of water quality, harm to lake ecosystems, and watershed pollution, while promoting natural aesthetic values within the Existing Community Zone.
§ 4.3 **HIGHLANDS RESOURCE AND SPECIAL PROTECTION AREAS**

The Highlands RMP establishes Highlands Resource Areas and Special Protection Areas, each delineated based on the existence of one or more significant Highlands resources or critical or sensitive environmental characteristics or features. The Borough/Township/Town Master Plan incorporates each of these areas to the extent of their physical limits within the Highlands Area, and the specific policies, goals and objectives relating to their protection as an integral component of the planning and land use policies of the municipality.

In keeping with the Borough/Township/Town Master Plan, the following Highlands Resource Areas and Special Protection Areas are herewith established as overlays to municipal zoning:

§ 4.3.1 *Forest Resource Area*

The Forest Resource Area contains high ecological value forest areas including forested areas having the least fragmentation which are vital to the maintenance of ecological processes. The Forest Resource Area includes forested areas characterized by one or more of the following forest integrity indicators: a contiguous forest patch of 500 acres or more; an area consisting of 250 contiguous acres or more of Core Forest; or areas accounting for 45% or more of mean total forest cover.

§ 4.3.2 *Highlands Open Waters*

Highlands Open Waters consist of all springs, wetlands, intermittent and ephemeral streams, perennial streams and bodies of surface water, whether natural or artificial (excluding swimming pools), located wholly or partially within the boundaries of the Highlands Area.

§ 4.3.3 *Riparian Areas*

Riparian Areas are areas adjacent to and hydrologically interconnected with Highlands Open Waters rivers and streams. They consist of flood prone areas, wetlands, soils that are hydric, alluvial, or have a shallow depth to ground water. Riparian Areas also include wildlife passage corridors within 300 feet of surface Highlands Open Waters features.

§ 4.3.4 *Steep Slope Protection Area*

The Steep Slope Protection Area is comprised of those portions of the Highlands Area encompassing a minimum of 5,000 square feet of contiguous area, which are characterized either by grades of 15% or greater, or, if in a Riparian Area, 10% or greater. The Steep Slope Protection Area includes the following sub-classifications:

A. **Severely Constrained Slopes.** All lands having slopes of 20% or greater and lands within Riparian Areas having slopes of 10% and greater.

B. **Moderately Constrained Slopes.** All forested non-Riparian Area lands having a slope of 15% to less than 20%.

C. **Constrained Slopes.** All non-forested, non-Riparian Area lands having a slope of 15% to less than 20% and exhibiting one or more of the following characteristics: a) highly susceptible to erosion; b) shallow depth to bedrock; or c) a Soil Capability Class indicative of wet or stony soils.

D. **Limited Constrained Slopes.** All non-forested, non-Riparian Area lands having a slope of 15% to less than 20%, which are not highly susceptible to erosion, and do not have a shallow depth to bedrock or a Soil Capability Class indicative of wet or stony soils.
§ 4.3.5 Critical Habitat

Critical Habitat is comprised of all land areas in the Highlands Area designated as Critical Wildlife Habitat, Significant Natural Areas, and Vernal Pools, including Vernal Pool Buffers. Each of these is established as an overlay to municipal zoning.

A. **Critical Wildlife Habitat.** Within the Planning Area, Critical Wildlife Habitat consists of those areas within NJDEP’s Landscape Project Version 3 (or more recent version as amended) that are Landscape Rank 3 through 5. In addition, it includes areas that are designated Landscape Rank 2 and have a Highlands Conservation Rank of Critically Significant or Significant. Within the Preservation Area, Critical Wildlife Habitat consists of those areas within Landscape Rank 2 through 5, including all Highlands Conservation Ranks.

B. **Significant Natural Areas.** Significant Natural Areas consist of the 95 NJDEP Natural Heritage Priority Sites, including habitat for documented threatened and endangered plant species, and lands that include unique or regionally significant ecological communities and other significant natural sites and features.

C. **Vernal Pools.** Areas designated as Vernal Pools consist of NJDEP-certified vernal pools plus a 1,000-foot wide protection buffer surrounding the perimeter of each such pool. Vernal Pools consist of confined, ephemeral wet depressions that support distinctive, and often endangered, species that are specially adapted to periodic extremes in water pool levels.

§ 4.3.6 Carbonate Rock Areas

Carbonate Rock Areas consist of those portions of the Highlands Area that are underlain by carbonate rock, such as limestone and dolomite. Inclusion of lands within a Carbonate Rock Area does not imply the presence of karst features area-wide, but is indicative of the potential for solution of underlying carbonate rock by surface or ground water, over time.

§ 4.3.7 Lake Management Area

The Lake Management Area is defined to include the drainage area of all Highlands Area lakes having a surface area of greater than ten acres. The Lake Management Area includes the following sub-classifications:

A. **Shoreland Protection Tier.** The Shoreland Protection Tier consists of the lands surrounding a lake that lie within 300 feet of its shoreline, or between the shoreline and the nearest property line adjacent to and alongside of the lake, whichever is the lesser.

B. **Water Quality Management Tier.** The Water Quality Management Tier consists of the lands surrounding a lake that lie within 1,000 feet of its shoreline. This tier includes the Shoreland Protection Tier.

C. **Scenic Resource Tier.** The Scenic Resource Tier consists of the lands surrounding a lake that lie within 300 feet of its shoreline (the Shoreland Protection Tier) plus any lands within 1,000 feet of its shoreline that fall within the viewshed observable from the opposite shoreline. The limits of such viewsheds require mapped delineations based upon the topography of such lands, with the highest observable elevations, forming the viewshed perimeter.

D. **Lake Watershed Tier.** The Lake Watershed Tier consists of the entirety of the land area draining to a lake, as determined through the evaluation of drainage areas using LiDAR topographic analysis or other topographic data where LiDAR data are not available.

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§ 4.3.8 Prime Ground Water Recharge Areas
Prime Ground Water Recharge Areas consist of those lands having the highest ground water recharge rates within each HUC14 subwatershed (as indicated by analysis using the GSR-32 methodology of the New Jersey Geological Survey), and that cumulatively provide forty percent (40%) of the total recharge volume for the subwatershed.

§ 4.3.9 Wellhead Protection Areas
Wellhead Protection Areas consist of those areas surrounding a public water system well, from which ground water flows to the well and ground water contamination, if it occurs, may pose a significant threat to the quality of water withdrawn from the well. Wellhead Protection Areas are composed of three tiers reflecting the time required for ground water to flow into the well, as follows:

A. **Wellhead Protection Area Tier 1.** That area of land within a Wellhead Protection Area (WHPA) from which the flow of ground water to the well has a Time of Travel of 2 years.

B. **Wellhead Protection Area Tier 2.** That area of land within a WHPA from which the flow of ground water to the well has a Time of Travel of 5 years.

C. **Wellhead Protection Area Tier 3.** That area of land within a WHPA from the flow of ground water to the well has a Time of Travel of 12 years.

§ 4.3.10 Highlands Special Environmental Zone
The Highlands Special Environmental Zone consists of lands having the highest priority ranking for preservation based on the Highlands Council Resource Assessment methodology. This assessment considers five indicators for the protection of water resources and environmentally sensitive lands, including: Forest within the Forest Resource Area, Riparian Corridor Condition High, Highlands Open Water Protection Area, Critical Habitat, and the Water Quality Management Tier of Lake Management Areas (excluding those of the Lake Community Sub-Zone). The Special Environmental Zone is located within the Highlands Conservation Priority Area and is located solely within the Preservation Area.

§ 4.3.11 Agricultural Resource Area
The Agricultural Resource Area consists of those areas of the most concentrated and contiguous agricultural uses as determined based on the prevalence of active farms, contiguous farming units of 250 acres or more, and the presence of Important Farmland Soils.

§ 4.3.12 Highlands Historic, Cultural and Archaeological Resources
Highlands Historic, Cultural and Archaeological Resources consist of those properties, sites and districts listed in the Highlands Historic, Cultural and Archaeological Resources Inventory. These include but are not limited to: all properties listed on the New Jersey or National Register of Historic Places; all properties which have been deemed eligible for listing on the New Jersey or National Register of Historic Places; and all properties for which a formal opinion of the State Historic Preservation Office (SHPO) has been issued.

§ 4.3.13 Highlands Scenic Resources
Highlands Scenic Resources consist of those properties, sites, and viewsheds listed in the Highlands Scenic Resources Inventory. These include but are not limited to national historic landmarks and publicly-owned federal, state and county parks, forests, and recreation areas.
§ 4.4 ADOPTION OF HIGHLANDS AREA DISTRICT MAPS
All Highlands Area Districts as set forth under § 4.1 through § 4.3, above, including Planning and Preservation Areas, Zones and Sub-Zones, Resource Areas and Special Protection Areas, are hereby established by the designation, location and boundaries as set forth for each respectively, in the following maps, each of which is hereby declared to be a part of this Highlands Area Land Use Ordinance:

§ 4.4.1 Borough/Township/Town Highlands Area
Map titled “Borough/Township/Town Highlands Area,” prepared by Burgis Associates, Inc., dated ________, depicting the municipality along with delineation of the Preservation Area and/or Planning Area (as applicable to municipality) as provided by the Highlands Council (Exhibit 1).

§ 4.4.2 Highlands Zones and Sub-Zones
Map titled “Highlands Zones and Sub-Zones,” prepared by Burgis Associates, Inc., dated ________, depicting the Borough/Township/Town Highlands Area with delineation of Highlands Zones and Sub-Zones (as applicable to municipality) as provided by the Highlands Council (Exhibit 2).

§ 4.4.3 Highlands Area Resource and Special Protection Areas
Series of Maps (as applicable to municipality) titled as listed below, prepared by Burgis Associates, Inc., and dated ________ (unless otherwise specifically noted), as provided by the Highlands Council.

A. “Forest Resource Area.” Map depicting that portion of the Borough/Township/Town Highlands Area designated as Forest Resource Area (Exhibit 3).
B. “Highlands Open Waters.” Map depicting Highlands Open Waters located wholly or partially within the Borough/Township/Town Highlands Area (Exhibit 4).
C. “Highlands Riparian Areas.” Map depicting Riparian Areas located within the Borough/Township/Town Highlands Area (Exhibit 5).
D. “Steep Slope Protection Area.” Map depicting those portions of the Borough/Township/Town Highlands Area having 5,000 square feet or more of contiguous surface area in steep slopes (Exhibit 6).
E. “Critical Wildlife Habitat.” Map depicting those portions of the Borough/Township/Town Highlands Area designated as Critical Wildlife Habitat (Exhibit 7).
F. “Significant Natural Areas.” Map depicting those portions of the Borough/Township/Town Highlands Area designated as Significant Natural Areas (Exhibit 8).
G. “Vernal Pools.” Map depicting Vernal Pool locations (by center-point only, non-delineated), including representative (1,000-feet from centerpoint) Vernal Pool Buffers, located within the Borough/Township/Town Highlands Area (Exhibit 9).
H. “Carbonate Rock Areas.” Map depicting those portions of the Borough/Township/Town Highlands Area designated as Carbonate Rock Areas (Exhibit 10).
I. “Lake Management Area.” Map depicting lakes of the Borough/Township/Town Highlands Area having a surface area greater than ten acres and associated lake management tiers, including representative Scenic Resource Tier (i.e., non-delineated; 1,000-feet from estimated shoreline) (Exhibit 11).
J. “Prime Ground Water Recharge Areas.” Map depicting those portions of the Borough/Township/Town Highlands Area designated as Prime Ground Water Recharge Areas (Exhibit 12).

K. “Wellhead Protection Areas.” Map depicting the location of public water system wells within the Borough/Township/Town Highlands Area and the associated wellhead protection tiers surrounding them (Exhibit 13).

L. “Highlands Special Environmental Zone.” Map depicting those lands of the Borough/Township/Town Highlands Area designated by the Highlands Council as Highlands Special Environmental Zone (Exhibit 14).

M. “Agricultural Resource Area.” Map depicting those lands of the Borough/Township/Town Highlands Area designated as Agricultural Resource Area (Exhibit 15).

N. “Highlands Historic, Cultural and Archaeological Resources.” Map depicting properties located within the Borough/Township/Town Highlands Area that are listed in the Highlands Historic, Cultural, and Archaeological Resources Inventory (Exhibit 16).

O. “Highlands Scenic Resources.” Map depicting properties located within the Borough/Township/Town Highlands Area that are listed in the Highlands Scenic Resources Inventory (Exhibit 17).

§ 4.5 INTERPRETATION OF DISTRICT MAPS BOUNDARY LINES
All Highlands Area District maps, as set forth at § 4.4 above, have been developed using Highlands Council Geographic Information System (GIS) digital data. Any map altered or modified from that initially provided by the Highlands Council has received Highlands Council authorization prior to its inclusion in this Ordinance. Any map boundary line that is inconsistent with Highlands Council maps or associated data shall be deemed null and void to the extent of such inconsistency, until or unless the altered delineation is approved by the Highlands Council.

§ 4.5.1 Municipal Boundary Lines
The Highlands Act relies upon municipal boundary lines to designate the limits of the Highlands Region. The Highlands Council dataset establishing municipal boundary lines was created by dissolving parcel level polygons (GIS) for each of the 88 municipalities within New Jersey Highlands. Parcels from the following counties have a general accuracy of plus or minus five (5) feet: Bergen, Passaic, Somerset, Sussex, and Warren. Data from Hunterdon and Morris were provided by the counties and may have a different accuracy level. This dataset is for representative purposes only. Where the specific delineation of any municipal boundary line comes into question, municipal information such as metes and bounds surveys shall be relied upon for any final determination.

§ 4.5.2 Borough/Township/Town Highlands Area
The “Borough/Township/Town Highlands Area” map (§ 4.4.1, above) provides the Highlands Preservation Area Boundary as described by the Highlands Act (N.J.S.A. 13:20-7a). To digitize the survey description, the Highlands Council used the Highlands Parcel Base, the NJDEP Hydrographic Layer for 2002, and the NJDOT Local Road Files from 2005 as references. In accordance with the Highlands Act, any natural geographical feature, including a river, stream or brook, used in the boundary description of the Preservation Area is considered to lie totally within the Preservation Area, while any road, railroad or railroad right of way is considered to lie totally outside of the Preservation Area. The use of property block and lot designations
include or exclude property from the Preservation Area, as described. Where a survey gore exists between a property boundary depicted upon a municipal tax map and the limits of a surveyed property noted in the Preservation Area description, the surveyed property boundary description is considered to constitute the Preservation Area boundary.

Additionally, the Preservation Area does not include land located within the boundaries of any regional center or town center designated by the State Planning Commission pursuant to the “State Planning Act,” P.L.1985, c.398 (C.52:18A-196 et al.) as of the date of enactment of the Highlands Act, except to the extent necessary as set forth in the boundary description of the Preservation Area to reflect appropriate and nearest practicable, on-the-ground, and easily identified reference points.

§ 4.5.3 Highlands Zones, Sub-Zones, Resource Areas, Special Protection Areas
The boundaries delineated for all Highlands Zones, Sub-Zones, Resource Areas, and Special Protection Areas were developed by the Highlands Council based on the factors noted in the description of each, above. Further discussion is provided in the Borough/Township/Town Environmental Resource Inventory and in the Highlands Element of the Borough/Township/Town Master Plan.

§ 4.5.4 Mapping Conflicts
In the event of a conflict concerning the location of any Highlands District boundary line, the delineations provided by the Highlands Council as adopted herein, shall be determinative. Modifications may be requested of the Highlands Council through submittal of an RMP Update or Map Adjustment in such manner as required by the Highlands Council. In the event of any conflict concerning the Preservation Area boundary line, the metes and bounds description provided by the Highlands Act shall govern, with any discrepancy or dispute residing under the jurisdiction of the NJDEP. In the event of a conflict concerning the delineation of any parcel plotted by the Highlands Council using GIS software, a current property survey shall be determinative.
ARTICLE 5. HIGHLANDS AREA ZONE DISTRICT REGULATIONS

§ 5.1 APPLICABILITY
The provisions of this Article modify the regulations applicable to the underlying municipal Zoning Districts, with specific regard to permitted uses, conditionally permitted uses, prohibited uses, and densities and intensities of development.

§ 5.2 USE REGULATIONS
All principal and accessory uses permitted or conditionally permitted by the underlying municipal Zoning Ordinance shall remain in effect as provided therein, except to the extent that such uses may be modified or eliminated by the provisions of this section. Any and all principal and accessory uses prohibited by the underlying Zoning Ordinance shall remain prohibited as provided therein, unless specifically designated as a permitted use by the provisions of this section. The lists of permitted, conditionally permitted and prohibited uses of the underlying Zoning Ordinance are herewith amended as necessary to provide for the use allowances and use restrictions that follow.

§ 5.2.1 Permitted Uses
The permitted uses applicable to that portion of any municipal Zoning District overlain by the Highlands District classifications listed below shall be modified in accordance with the provisions that follow. In addition, any use permitted by the underlying zoning that is cited at § 5.2.2 or § 5.2.3 below, shall be amended in accordance with the provisions set forth therein.

A. All Highlands Zones & Sub-Zones. Where the development of any principal or accessory use that is permitted by the underlying municipal Zoning Ordinance is made physically infeasible due to the maximum density of development requirements at § 5.3 below, such use shall no longer apply as a permitted use. Where the septic system density allowance calculated pursuant to § 5.3 would permit a maximum of one (1) dwelling unit for a given parcel, for example, but the underlying Zoning Ordinance would permit construction of a multi-family project (such as townhomes or garden apartments) which by definition would contain more than one dwelling unit, the permitted use would be made physically infeasible and must no longer be considered a permitted use. This provision shall apply only to the extent that the Highlands Zone or Sub-Zone from which the density requirement derives, intersects with the affected underlying municipal Zoning District. Where the development type remains feasible, its status as a permitted use shall remain, provided that the applicable density allowances shall be those of § 5.3.

B. Agricultural Resource Area.

1. Permitted principal uses shall be supplemented to include the agricultural and horticultural uses (defined at § 3.2) specified at § 6.10.3 below. Accessory uses permitted in conjunction with these uses shall include ancillary, incidental or otherwise related supporting uses and the accessory structures devoted to such uses. [The municipality must establish the specific agricultural and horticultural uses and accessory uses to be permitted. These, along with bulk requirements and other pertinent regulations should be developed by the municipality and provided at § 6.10.3 below. If adequate regulations already exist which apply (or are made to apply) to the Highlands Area ARA, these requirements may be addressed by appropriate language and reference herein to the applicable municipal ordinance(s) (e.g., title, ordinance number, effective date) that accomplishes same.]

DRAFT FOR MUNICIPAL REVIEW
-37-
2. The permitted principal residential use for any underlying municipal Zoning District which permits residential development as a principal use, shall be restricted solely to residential cluster development in accordance with the Residential Cluster Development standards as set forth at § 8.1, below. This provision shall not apply if the minimum threshold requirements for residential cluster development pursuant to § 8.1.6 cannot be satisfied.

3. Permitted principal uses shall include the continuance of any lawfully existing residential use permitted by the underlying municipal Zoning Ordinance as of the date of adoption of this Ordinance.

C. Highlands Special Environmental Zone. For lands falling within the Highlands Special Environmental Zone, any principal or accessory use, and any structure related or devoted to such use, that is permitted by the underlying municipal Zoning Ordinance shall no longer be permitted unless:

1. For any non-Major Highlands Development proposal, a Special Environmental Zone waiver permitting such use is issued by the Highlands Council; or

2. For any Major Highlands Development proposal, an HPAA with waiver is issued by the NJDEP.

§ 5.2.2 Conditional Uses
The conditional uses applicable to that portion of any municipal Zoning District overlain by the Highlands District classifications listed below shall be modified in accordance with the provisions that follow. In addition, any use conditionally permitted by the underlying zoning that is cited at § 5.2.1 above or § 5.2.3 below, shall be amended in accordance with the provisions set forth therein.

A. All Highlands Zones & Sub-Zones. Where the development of any principal or accessory use that is conditionally permitted by the underlying municipal Zoning Ordinance is made infeasible by the density of development requirements of § 5.3 below, such use shall no longer be considered a conditionally permitted use. (See example at § 5.2.1.A, above.) This provision shall apply only to the extent that a Highlands Zone or Sub-Zone from which the density requirement derives, intersects with the affected underlying municipal Zoning District. Where the development type remains feasible, its status as a conditionally permitted use shall remain, provided that the applicable density and intensity allowances shall consist of those at § 5.3.

B. Prime Ground Water Recharge Area. Any principal or accessory use (or structure related or devoted to such use) which is designated as a Minor Potential Contaminant Source (PCS) by the Highlands Council (see APPENDIX C), or as Major PCS #17 of Appendix B pertaining to livestock, where otherwise permitted by the municipal ordinance within a designated Prime Ground Water Recharge Area, shall be made a conditional use therein only, with the applicable conditions including, at minimum:

1. Submission, approval and implementation of an Operations and Contingency Plan, in accordance with all requirements of the applicable Board of Health Ordinance [insert reference, such as title, code number, effective date]; and

2. Facility and site design shall incorporate best management practices to prevent unintentional discharge of contaminants to ground water, surface water bodies, and land areas supporting or proximate to the facility or facility operations.
C. **Wellhead Protection Area, Tier 1.** Any principal or accessory use (or structure related or devoted to such use) which is designated by the Highlands Council as either Minor Potential Contaminant Source (PCS) #12 or Minor PCS #14, each as listed in Appendix C, or as Major PCS #17 of Appendix B, where otherwise permitted by the municipal ordinance within a designated Tier 2 Wellhead Protection Area, shall be made a conditional use therein only, with the applicable conditions including, at minimum:

1. Submission, approval and implementation of an Operations and Contingency Plan, in accordance with all requirements of the applicable Board of Health Ordinance [insert reference, such as title, code number, effective date]; and

2. Facility and site design shall incorporate best management practices to prevent unintentional discharge of contaminants to ground water, surface water bodies, and land areas supporting or proximate to the facility or facility operations.

D. **Wellhead Protection Area, Tier 2.** Any principal or accessory use (or structure related or devoted to such use) which is designated as a Minor Potential Contaminant Source (PCS) by the Highlands Council (see Appendix C), or as Major PCS #17 of Appendix B pertaining to livestock, where otherwise permitted by the municipal ordinance within a designated Tier 2 Wellhead Protection Area, shall be made a conditional use therein only, with the applicable conditions including, at minimum:

1. Submission, approval and implementation of an Operations and Contingency Plan, in accordance with all requirements of the applicable Board of Health Ordinance [insert reference, such as title, code number, effective date]; and

2. Facility and site design shall incorporate best management practices to prevent unintentional discharge of contaminants to ground water, surface water bodies, and land areas supporting or proximate to the facility or facility operations.

E. **Wellhead Protection Area, Tier 3.** Any principal or accessory use (or structure related or devoted to such use) which is designated as a Major or Minor Potential Contaminant Source (PCS) by the Highlands Council (see Appendix B and Appendix C), where otherwise permitted by the municipal ordinance within a designated Tier 3 Wellhead Protection Area, shall be made a conditional use therein only, with the applicable conditions including, at minimum:

1. Submission, approval and implementation of an Operations and Contingency Plan, in accordance with all requirements of the applicable Board of Health Ordinance [insert reference, such as title, code number, effective date]; and

2. Facility and site design shall incorporate best management practices to prevent unintentional discharge of contaminants to ground water, surface water bodies, and land areas supporting or proximate to the facility or facility operations.

F. **Highlands Special Environmental Zone.** Any conditionally permitted principal or accessory use (or structure related or devoted to such use) applicable to lands falling within the Highlands Special Environmental Zone, shall no longer be permitted unless:

1. For any non-Major Highlands Development proposal, a Special Environmental Zone waiver permitting such conditional use is issued by the Highlands Council; or
2. For any Major Highlands Development proposal, an HPAA with waiver is issued by the NJDEP.

§ 5.2.3 Prohibited Uses
The prohibited uses applicable to that portion of any municipal Zoning District overlain by the Highlands District classifications listed below shall be modified as necessary to comport with the provisions that follow. These provisions shall not apply to Appendix B Major PCS #17 pertaining to livestock, to Appendix C Minor PCS #12 pertaining to agricultural chemical storage, or to Appendix C Minor PCS #14 pertaining to livestock.

A. Carbonate Rock Area. The following principal or accessory uses and structures related or devoted to such uses, where otherwise permitted by the underlying municipal Zoning Ordinance, are expressly prohibited from any portion of the Carbonate Rock Area or from any lands identified as draining into a designated Carbonate Rock Area:

1. Solid waste landfills;
2. Hazardous waste storage and disposal facilities;
3. Hazardous materials storage and handling facilities; and
4. Underground storage tanks.

B. Prime Ground Water Recharge Area. Any principal or accessory use, or structure related or devoted to such use, which is designated as a Major Potential Contaminant Source (PCS) by the Highlands Council (see APPENDIX B), where otherwise permitted by the municipal ordinance, is expressly prohibited from any portion of the Prime Ground Water Recharge Area.

C. Wellhead Protection Area, Tier 1. Any principal or accessory use, or structure related or devoted to such use, which is designated by the Highlands Council as a Major or Minor Potential Contaminant Source (PCS) or as a potential source of pathogenic contaminants (see APPENDIX B and APPENDIX C), where otherwise permitted by the municipal ordinance, is expressly prohibited from any portion of a Tier 1 Wellhead Protection Area.

D. Wellhead Protection Area, Tier 2. Any principal or accessory use, or structure related or devoted to such use, which is designated as a Major Potential Contaminant Source (PCS) by the Highlands Council (see APPENDIX B), where otherwise permitted by the municipal ordinance, shall be expressly prohibited from any portion of a Tier 2 Wellhead Protection Area.

§ 5.3 Density and Intensity of Development
The provisions of this section are intended to ensure that development in the Highlands Area occurs at densities and intensities that are appropriate to the water supply and wastewater treatment options available to support it. These provisions shall serve as a check on the various density/intensity provisions of the underlying Zoning Ordinance, which shall remain in effect to the extent not specifically in conflict with these provisions. The density/intensity allowances of the underlying Zoning Ordinance provisions reflect the intents and purposes set forth for the municipal zoning districts as established by the Master Plan and the effectuating Zoning Ordinances. They define and support the intended character and patterns of development for each district, setting forth the relationship between built form in a district and the lot or lots on which it is situated. The provisions of this section relate solely to ensuring that such development: a) does not exceed the capacity of the land, resources and infrastructure available to support it; b) is designed to minimize land disturbance and protect natural resources; and c) in the case of new or extended public (or
semi-public) infrastructure such as roadways, water and wastewater utilities, is configured to minimize per unit infrastructure costs while maximizing efficiency of use.

§ 5.3.1 Use of Terms
For purposes of these provisions, density of development standards refer to requirements of the underlying Zoning Ordinance that regulate the permitted number of dwelling units per acre of land, whether specifically defined as density standards or set forth as minimum lot size requirements for application to specific zoning districts. Intensity of development standards refer to those requirements used to define the relationship between the permitted extent, form and location of development of a lot, to the size, shape and configuration of the lot on which it is situated (e.g., floor area ratio, building coverage, building height, yard setbacks, number of stories).

§ 5.3.2 Applicability
Changes to the density or intensity standards of the underlying Zoning Ordinance required pursuant to this section shall not apply to development in the Highlands Area that is lawfully existing or approved as of the effective date of adoption of this Ordinance (pursuant to § 2.7 and § 2.5 above, respectively). These provisions shall apply, however, if modifications or improvements to such existing development result in either, for residential development (or any residential portion thereof) an increase in the number of residential units, or, for non-residential development (or any non-residential portion thereof), an increase in water demand by an average of 400 gallons per day or more, or for septic system yield by an average of 300 gallons per day or more. These provisions are expressly intended to apply to any change in use of an existing structure or structures, and require a determination as to any net increase. Where such a change converts a residential use to non-residential use, or vice versa, equivalent dwelling unit figures shall be applied to determine whether the change in use will result in a net increase in either water availability or septic system demand. For septic system demand, the equivalent dwelling unit wastewater flow shall be an average 300 gallons per day, while for water availability, the equivalent dwelling unit flow shall be an average 400 gallons per day.

§ 5.3.3 Base Maps
Base maps regarding water availability and wastewater treatment capacity appear in the technical information provided in the Conservation and Utility Services Plans of the Borough/Township/Town Master Plan Highland Element. These include the following, each of which is herewith adopted and incorporated as a component of this Ordinance: Net Water Availability Map (Exhibit 18), Public Community Water Systems Map (Exhibit 19), Highlands Domestic Sewerage Facilities Map (Exhibit 20), and Septic System Yield Map (Exhibit 21).

§ 5.3.4 Development Subject to Water Availability
The following density and intensity provisions notwithstanding, all new development (as defined at § 3.2) within the Highlands Area is subject to the availability of water sufficient in both quantity and quality to sustainably support it. Any proposed increase in the demand for water supply deriving from Highlands Area ground water sources or from surface water sources that are not associated with a NJDEP-approved safe yield, shall be accompanied by a finding of sufficient water capacity, which finding shall be issued by the Highlands Council. This provision shall apply to all development as defined at § 3.2, expressly including any change in use that entails an increase in the demand for such water supply. In the case of a Major Highlands Development such approval shall be evidenced by issuance of a Highlands Preservation Area Approval from the NJDEP. Specific requirements pertinent to new development reliant upon ground water supplies may be found at § 6.7.

§ 5.3.5 Development Served by Septic Systems

DRAFT FOR MUNICIPAL REVIEW

-41-
A. Preservation Area. Development proposals involving new or increased demand for septic system capacity in the Preservation Area shall be regulated in accordance with this section. These provisions shall override any density, intensity, bulk, or other standard of the underlying Zoning Ordinance that would permit a septic system density in excess of that as provided herein. Nothing herein shall be deemed to apply to the replacement or repair of an existing septic system, provided that no capacity increase is proposed.

1. Major Highlands Development. Any new individual subsurface disposal system (or aggregate of equivalent disposal units as provided at N.J.A.C. 7:38) proposed to serve a Major Highlands Development shall be authorized only by the NJDEP in accordance with NJDEP Preservation Area Rules (N.J.A.C. 7:38) and all other applicable requirements. In the case of any such system proposed in service to a cluster development, the provisions at A.3 below, shall also apply. The applicable septic system density requirements appear at A.4-A.5, below.

2. Non-Major Highlands Development. Any new individual subsurface disposal system (or aggregate of equivalent disposal units) proposed to serve a development that does not constitute a Major Highlands Development shall meet the septic system density requirements as provided at A.3 through A.5, below (A.4-A.5 from NJDEP Preservation Area Rules, N.J.A.C. 7:38), pursuant to the regulatory authority of this Ordinance and review by the appropriate municipal entity in accordance with the application procedures provided at Article 9.

3. Cluster Development. In addition to the gross septic system density requirements of A.4-A.5 below, any cluster development reliant upon individual wells (see Residential Cluster Development at § 8.1) shall be subject to a net septic system density limitation, calculated on the basis of the developed portion of a site, as provided at B.9(d), below. The density (acres per septic system) shall meet or exceed that necessary to ensure that nitrate dilution for the developed portion of the site is maintained at 10 mg/L, or less. For purposes of this calculation, model inputs (see subsection B, below) shall include the requirements of subsection B.3 and B.4. The nitrate target shall be 10 mg/L.

4. Septic System Density Requirements. A new individual subsurface disposal system or aggregate of equivalent disposal units where the sanitary wastewater design flow is 2,000 gallons per day or less shall be permitted only in accordance with the density limitations, at 4.a. through 4.d., below. Forest under this subsection shall be identified and calculated as provided at APPENDIX A (from N.J.A.C. 7:38-3). For the purposes of this subsection, “equivalent disposal unit” means: for residential development, one system serving one single-family home sized in accordance with the Standards for Individual Subsurface Sewage Disposal Systems, Volume of Sanitary Sewage, at N.J.A.C. 7:9A-7.4; or for non-residential development or residential development comprising structures other than single-family homes, 500 gallons of wastewater per day generated for the development type, as determined in accordance with N.J.A.C. 7:9A-7.4.

a) On a lot that contains all forest, there shall be no more than one individual subsurface disposal system or equivalent disposal unit for each 88 acres of the lot;

b) On a lot that does not contain forest, there shall be no more than one individual subsurface disposal system or equivalent disposal unit for each 25 acres of the lot;

c) For the purposes of this subsection, the acreage of a lot shall be the total area of the lot(s) on which the proposed development is located as described by deed(s) or subdivision plat(s) on file with the municipal or county clerk.
d) For a lot containing both forest and non-forest areas, the total number of allowable individual subsurface disposal systems or equivalent disposal units permitted on the lot shall be determined by calculating the number of acres of the lot that are forest (as determined in accordance with APPENDIX A, from N.J.A.C. 7:38-3.9) and dividing that number by 88; calculating the remaining number of acres of the lot that are not forest and dividing that number by 25; and then summing the results. If the sum results in a fraction, the number shall be rounded down to the nearest whole number in order to determine the number of permitted individual subsurface disposal systems or equivalent disposal units.

c) For purposes of this section, noncontiguous lots in existence as of August 10, 2004 may be aggregated such that the number of individual subsurface disposal systems or equivalent disposal units that would be permitted under this section on one or more of the aggregated lots is transferred to one or more of the aggregated lots provided:

(i) The proposed development on the lot or lots to receive the transferred individual subsurface disposal systems or equivalent disposal units complies with all federal, state and local laws;

(ii) In the case of a Major Highlands Development, the proposed development on the lot or lots to receive the transferred individual subsurface disposal systems or equivalent disposal units does not require a waiver of any requirement of N.J.A.C. 7:38 and is constructed in accordance with the Highlands Act and N.J.A.C. 7:38, inclusive of 3% maximum impervious surface limitations;

(iii) The lots to be aggregated under this paragraph are all located in the Preservation Area and for Major Highlands Developments, within the same HUC14; and

(iv) The lot or lots from which the individual subsurface disposal systems or equivalent disposal units are to be transferred are subject to a conservation restriction against future disturbance. For Major Highlands Development such restrictions shall be in accordance with N.J.A.C. 7:38-6.3, for non-Major Highlands Development such restrictions shall be in accordance with § 9.2.3 of this Ordinance.

5. Additional Septic System Requirements. In addition to the requirements above, individual subsurface sewage disposal systems or equivalent disposal units shall satisfy the Standards for Individual Subsurface Sewage Disposal Systems (N.J.A.C. 7:9A) without extraordinary measures, including replacement of disposal field soil with permeable material or mounding of a disposal field to achieve the required depth to ground water or confining layer.

B. Planning Area. Development proposals involving new or increased demand for septic system capacity in the Planning Area shall be regulated in accordance with this subsection. These provisions shall override any density, intensity, bulk, or other standard of the underlying Zoning Ordinance that would otherwise permit a septic system density or use of septic system yield in excess of that as provided herein. These provisions shall apply equally in the case of any agricultural or horticultural development application proposing a new septic system to serve a residential dwelling unit (or accessory dwelling unit). Nothing herein shall be deemed to apply to the replacement or repair of an existing septic system, provided that no capacity increase is proposed.

1. Septic System Density Requirements. Septic system density (gross acres per septic system) in the Planning Area shall meet or exceed that necessary to ensure compliance with the nitrate dilution dilution.
allows establishment below, for each Highlands Zone and Sub-Zone. Development proposals shall be evaluated on project-specific basis for compliance with these requirements, using the methodology provided herein.

2. **Maximum Nitrate Dilution Allowances.**

   a) Existing Community Zone (and Sub-Zones) – 2 mg/L.

   b) Conservation Zone (and Sub-Zones) – 1.87 mg/L

   c) Protection Zone (and Sub-Zones) – 0.72 mg/L

3. **Nitrate Dilution Model.** To determine the minimum land area required per septic system (or per unit increase in required septic system capacity), a drought recharge-based nitrate dilution model shall be applied. This model is available through the Highlands Council (see Highlands Council website, http://www.highlands.state.nj.us) and derives from two independent methods: a mass-dilution (modified Trela-Douglas) model and the New Jersey Geological Survey's (NJGS) ground-water-recharge method. It provides the minimum number of acres required per septic system (applied as an average density) to ensure that recharge is sufficient to achieve nitrate dilution targets. [Model not yet available; to be posted.]

4. **Input Factors.** The following factors, representative of a one-family household, or average wastewater generation of 300 gallons per day, shall be used as inputs to the nitrate dilution model:

   a) Household size of four (4) persons;

   b) Average nitrate loading of ten (10) pounds per person per year; and

   c) Drought ground water recharge for the HUC14 subwatershed as dilution.

5. **Model Output.** The model output indicates the minimum acreage required per septic system, where that system is designed for a one-family household generating a maximum flow of 300 gallons of wastewater per day. For purposes of this subsection, the resulting acreage shall be applied as the minimum average acreage necessary to support every 300 gallons of daily wastewater flow generated by any proposed use where the following unit/square footage figures shall be applied as 300 gallon-per-day equivalents:

   a) Residential Uses (All Types) – 1 dwelling unit

   b) Office and Commercial Uses – 2,400 square feet of floor area

   c) Industrial (Including Warehousing/Distribution) Uses – 18,182 square feet of floor area (Excluding Process Wastewater Flow)

6. **Septic System Yield.** The maximum septic system yield shall be determined by dividing the total area of the subject property by the minimum average acreage required per septic system (or per unit/square area equivalent), as determined by the nitrate dilution model. Where the development application proposes unit or floor area equivalents (or any combination thereof) in a quantity equal to or less than the calculated septic system yield, it shall be deemed compliant with this section. If a project site is located within more than one HUC14 subwatershed, the nitrate dilution model shall...
be run for each portion of the site using the drought ground water recharge applicable to each HUC14, respectively, with separate septic system yields computed accordingly.

7. **Floor Area.** For the purposes of this subsection, floor area shall comprise the area of each floor of a building lying within the inside perimeter of its exterior walls excluding vent shafts, courts, and unfinished areas such as basements or attics having ceiling heights less than that required for habitable space under the building code; floor areas not provided with surrounding exterior walls shall be included to the extent of the usable area within the horizontal projection of the roof or floor above.

8. **Lot Area.** For the purposes of this subsection, the acreage of a lot shall be the total area of the lot(s) on which the development is proposed to be located as described by deed(s) or subdivision plat(s) on file with the municipal or county clerk.

9. **Application of Results.**

   a) **Detached One- or Two-Family Residential Development.** Where the underlying density (or minimum lot size) allowances of the municipal Zoning Ordinance would otherwise permit a greater number of units, the septic system density and septic system yield resulting from the nitrate dilution analysis may be applied as the minimum lot size and the maximum permitted dwelling unit yield [*optional: or subject to the provisions of 9.d, below, as the minimum average lot size with the septic system yield as the maximum unit yield.*] Alternatively, the underlying Zoning Ordinance allowances may be applied over a portion of the project area, subject to the limitations of 9.d, below, to the point at which the calculated septic system yield (by HUC14) is reached, with the remainder of the lot area left undeveloped. [*If the municipality will adopt the Residential Cluster Development regulations (mandatory for residential development in any Agricultural Resource Area) the first of the following sentences is optional; the second is required.*] If the minimum threshold requirements for Residential Cluster Development can be met (see § 8.1.6), the applicant may choose to cluster the development project in accordance with the requirements as provided therein. If the minimum threshold requirements for Residential Cluster Development can be met (see § 8.1.6 and the project is located within the Agricultural Resource Area, cluster development is mandatory as provided at § 8.1, and the preceding options shall not apply.]

   b) **Multi-Family Residential Development.** Where the underlying density allowances of the municipal Zoning Ordinance would otherwise permit a greater number of units, the septic system yield resulting from the nitrate dilution analysis shall be applied as the maximum permitted dwelling unit yield.

   c) **Non-Residential and Mixed Residential/Non-Residential Development.** Where the underlying density allowances of the municipal Zoning Ordinance would otherwise permit greater non-residential floor area, or a greater number of residential units, or both, the septic system yield resulting from the nitrate dilution analysis shall be applied using the 300 gallon-per-day equivalents, as provided at B.3, above, to determine the maximum permitted yield or combined yield.

   d) **Residential Cluster Development.** Where residential clustering [*optional: or lot averaging*] dependent upon individual on-site wells for water supply, is proposed, the septic system density applicable to the developed portion of a site, or net septic system density, shall in no case result in a nitrate dilution in excess of 10 mg/L. This determination shall be made by application of the drought recharge-based nitrate dilution model as described above, using 10 mg/L as the nitrate...
dilution target. For purposes of this calculation, septic system yield shall be calculated on the basis of the developed portion of the site only, which shall consist of a contiguous land area including the following:

(i) All land area proposed to be occupied by buildings, structures and associated improvements, all land area to be disturbed in connection with the construction or installation of such buildings, structures and improvements, and all of the land area intervening; and

(ii) All land area dedicated to any street or roadway providing public (or common) access to the development, to the limits of the right-of-way, easement, or other area(s) designated to contain such common access; and

(iii) All land dedicated to a community on-site stormwater detention facility, or other like facility providing public (or common) services to the development, each to the limits of the easement, lot line(s), or other area(s) designated to contain such common facility.

10. Aggregation of Septic System Yield. Nothing herein shall be construed to prohibit the aggregation of available septic system yield from contiguous or noncontiguous Planning Area parcels within the same HUC14 subwatershed in support of a new development project on one or more such parcels, provided that:

a) The contribution of septic system yield shall occur only where excess yield is available;

b) The contribution of septic system yield from any already-developed parcel shall be permitted only where sufficient to equal one (1) dwelling unit or more, or for non-residential development, one (1) 300 gallon-per-day floor area equivalent or more;

c) All lands contributing to such yield shall be dedicated to the support of the septic system(s) proposed for the new development, and no such land shall be counted in the calculation of septic system yield applicable to any other;

d) All such lands shall be deed-restricted to prohibit any future development requiring the availability of septic system yield, until or unless such yield is either returned from the new development it was initially deed-restricted to support, or is obtained (by dedication through deed restriction) from elsewhere within the same HUC14 subwatershed.

11. HUC14 Subwatershed Yield. The septic system yield applicable to a HUC14 subwatershed shall in no case be exceeded; an increase in any one portion of a HUC14 subwatershed must be offset by an equivalent decrease elsewhere within the same subwatershed.

12. Additional Septic System Requirements. In addition to the requirements above, individual subsurface sewage disposal systems or equivalent disposal units shall satisfy all standards for design, installation, and maintenance as set forth in the applicable provisions of the Borough/Township/Town Health Ordinance and any related and applicable regulatory requirements of other agencies having jurisdiction.

§ 5.3.6 Development Served by Existing or Extended Utility Infrastructure
Where lots proposed for development in the Highlands Area are served by physical connection to existing public water and wastewater utility infrastructure having sufficient available capacity, the density and intensity
of new development shall be consistent with all requirements of the underlying Zoning Ordinance. For purposes of this provision, “existing” water and wastewater utility infrastructure refers to that fully constructed and operational within an Existing Area Served as of the effective date of this Ordinance. Where extended utility infrastructure is approved pursuant to § 5.3.7 below, the requirements of the underlying Zoning Ordinance shall apply, with the provisions of § 5.3.8 following, applied in addition, and overriding in the event of any conflict. In the case of Residential Cluster Development, however, all requirements shall be as provided at § 5.3.8, with the maximum unit yield not to exceed that as determined by calculation of the septic system yield pursuant to § 5.3.5 above. An increase in units in excess of the calculated septic system yield shall be permitted only to the extent of any aggregated septic system yield, as provided in accordance with § 5.3.5 B.10.

§ 5.3.7 New or Extended Utility Infrastructure

A. Preservation Area. New, expanded or extended public water systems, wastewater collection and treatment systems, and community on-site treatment facilities are prohibited unless approved through issuance of either a Highlands Applicability Determination indicating that a project is exempt from the Highlands Act, or a Highlands Preservation Area Approval with waiver pursuant to N.J.A.C. 7:38.

B. Planning Area – Protection Zone, Conservation Zone, and Environmentally-Constrained Sub-Zones. New, expanded or extended public water systems, wastewater collection and treatment systems, and community on-site treatment facilities are permitted only where approved by the Highlands Council.

C. Planning Area – Existing Community Zone (excluding Environmentally-Constrained Sub-Zone) and Lake Community Sub-Zone. Expansion or creation of public water systems, wastewater collection and treatment systems, and community on-site treatment facilities are permitted: to serve lands which are appropriate for designated TDR Receiving Zones, infill development, or redevelopment; to address public health and safety; or to serve new areas for development that satisfy all other requirements of this Ordinance. (See applicable provisions at § 7.5 below.)

§ 5.3.8 Development Served by New or Extended Utilities

Where new development proposed in the Highlands Area will not rely upon installation of septic systems, but will be served by new or extended public water systems, wastewater collection and treatment systems, or community on-site treatment facilities, such development shall be in compliance with the net density and net intensity standards of this section.

A. New Single-Family Residential Development. The net density of new single-family residential development shall comprise a minimum of two (2) dwelling units per acre (DU/AC), where the acreage included in the calculation of net density shall consist of a contiguous, unconstrained land area within the lot area of the development:

1. Lying immediately adjacent to the limits of the right-of-way, easement or other dedicated utility area proposed to contain the main distribution/collection line(s) of the new or expanded utility infrastructure;

2. On which all of the residential units to be served by such utilities are proposed to be situated;

3. Including for each proposed lot, all land area proposed to be physically occupied by residential buildings, structures and associated lot improvements, all land area to be disturbed in connection with said development.

DRAFT FOR MUNICIPAL REVIEW
with the construction or installation of such buildings, structures and improvements, and all of the land areas intervening;

4. Including for each proposed lot, that portion of any new or existing street right-of-way lying adjacent to the lot, located between the edge of pavement or cartway line (or if existing or proposed, the curbl ine) and the limits of the right-of-way, this provision to include any right-of-way, easement or other area(s) dedicated to a street, roadway or common access drive, whether public or private;

5. Including all easements or other dedicated utility areas proposed to contain the distribution/collection line(s) of the new or expanded utility infrastructure, to the limits of such easements or dedicated areas;

6. Excluding any land area dedicated to a community on-site wastewater treatment plant, stormwater detention facility, or other like facility providing public (or common) services to the development, to the limits of the easement, lot lines or other area designated to contain such common facility; and

7. Where the term “unconstrained land area” refers to lands that are not encumbered by such constraints to development as: inviolable Highlands resources or Resource Areas (as defined and regulated pursuant to this Ordinance), wetlands, floodplains, or preserved land areas.

B. **New Multi-Family Residential Development** [if applicable]. The net density of new multi-family residential development (including any application proposing three or more attached residential units in one or more buildings on the same lot) shall comprise a minimum of six (6) dwelling units per acre (DU/AC), where the acreage included in the calculation of net density shall consist of that described above for new single-family residential development.

C. **New Non-Residential Development.** The net floor area ratio (FAR) applicable to new non-residential development shall not be less than 0.84 for the developed portion of the site, as determined in accordance with the provisions herein. Unless the provisions of the underlying Zoning Ordinance would permit a higher net FAR than 0.84, this figure shall also apply as a maximum allowance.

1. The net FAR shall be calculated by dividing the total floor area proposed for the subject property, by the area of the proposed developed portion of the property, where the total floor area is the numerator and the developed portion is the denominator.

2. For purposes of the net FAR calculation, the total floor area (the numerator) shall include the area of all floors of all buildings and structures having floors located on the subject property, measured for each floor at the exterior elevation line of the building or structure, and including any below-grade or attic flooring, flooring associated with any mezzanine or loft area, the floor area of any parking garage (enclosed or unenclosed, but not including at-grade, nonstructural parking areas), the floor area of any porch, balcony, deck, exterior stairway or access ramp, and where any open interior space extends vertically through more than one story of a building or structure (such as a 2-story foyer), the area of the opening at the floor level of each story it intersects, as though the flooring extended throughout.

3. For purposes of the net FAR calculation, the developed portion of the property (the denominator) shall include the impervious surface area of all buildings and structures served by physical connection to the new or extended utility infrastructure; the impervious surface area of any on-site...
parking structure (excluding any portion located beneath a building), including surface parking areas and access driveways; and the area of any disturbance including grading required in connection with the construction of such buildings, structures and parking areas. Any impervious surface area dedicated to pedestrian or bicycle use and access, including but not limited to sidewalks, bicycle paths or trails, or bicycle storage areas shall be excluded from the developed portion summation, inclusive of any disturbance related to its construction. Similarly excluded, shall be any disturbance relating to site improvements such as stormwater management systems and facilities, that incorporate Low Impact Development practices pursuant to § 7.1. Where any portion of an on-site parking area is shared toward satisfaction of the parking requirement pertaining to an off-site use, that portion, inclusive of the driveway(s) and aisle(s) required to provide access to it, shall be included in the developed portion summation at a rate of 50% of its actual coverage area.

4. For purposes of calculating the required number of parking spaces associated with any development covered under this section, only that portion of the floor area of any building or structure devoted specifically to the permitted use generating such parking requirement shall be included. Floor area devoted to such items as building mechanical equipment and utilities, incidental storage, stairways or elevators, or located in an unheated or unfinished space, or having a ceiling height less than that required for inclusion as habitable or occupiable space under the building code, shall be excluded.

5. For purposes of compliance with the parking requirement (number of spaces) associated with any development covered under this section, credit shall be applied for:

a) Each parking space located on-site including surface parking, underground parking, garage or parking deck parking;

b) Each shared off-site parking space located within 1,500 feet of the site for which the applicant satisfactorily demonstrates suitability and long-term rights of access;

c) Pertinent to any portion of the parking required for business patrons, the average number of available public parking spaces located within 1,500 feet of the site (whether on-street or provided via structured parking) during proposed peak business hours, as determined through a professionally conducted parking study, with this number shared proportionately in the event of other known development approvals generating similar parking demands during the same peak hours; and

d) Where demonstrated by certified information specifically pertinent to operation of the business or businesses to be located on the site (and incorporated into the conditions of any approval), each employee parking space made unnecessary by virtue of documented use of alternate means of transportation such as car- or van-pooling, walking, bicycling, mass transit, or any other form of public transportation.

6. Where any parking structure proposed in satisfaction of the requirements of this section would occupy grade level area beneath or within a building, the building shall be designed to provide habitable or occupiable space (as defined pursuant to the building code) devoted to the permitted principal use of the building, throughout any at-grade portion facing on and accessible to/from the public street (or other like public or semi-public area) serving or adjacent to the building or building site.
7. The provisions of this section shall in no event be construed to override the maximum building height limitation(s) of the underlying municipal Zoning Ordinance.

D. New Mixed Use Development. Where new mixed use development (including residential and non-residential components) is proposed, net density/intensity requirements shall apply in accordance with the format and configuration of the development project.

1. For mixed use development wherein the residential portion is separate and apart from the non-residential portion, the net density/intensity provisions of the preceding sections shall apply to each portion of the development, respectively.

2. For mixed use development in which residential and non-residential units are attached or share portions of the same building(s), the net FAR provisions applicable to new non-residential development (subsection 6c, above) shall apply, with the exception that at least one parking space required for each residential unit shall be provided on-site, and shared parking arrangements, if proposed, shall exclude such spaces. Net density provisions shall not apply.
ARTICLE 6.  HIGHLANDS AREA RESOURCE REGULATIONS

§ 6.1  FOREST RESOURCES

§ 6.1.1  Findings
Forests are a defining visual and functional feature of the Highlands Area. Forests provide habitat and sustenance for a diverse array of plants and animals and are essential to maintaining biodiversity. Forests protect against soil erosion, provide filtration for ground water recharge, and assist in protecting stream water quality. Forests retain moisture and sequester atmospheric carbon, thus helping to stabilize weather patterns and mitigate global warming. Forested areas of the Highlands Area offer important recreational resources, contribute to its unique scenic quality, and when managed sustainably, can provide a long-term source of wood and wood products.

§ 6.1.2  Total Forest Area
All portions of the Highlands Area identified by the Highlands Council as containing forest (as defined at § 3.2) appear in the map titled “Total Forest Area” (Exhibit 22), which is herewith adopted and incorporated as a component of this Ordinance. The Total Forest Area includes forested portions of lands designated as Forest Resource Area, as provided at § 4.3.1 above.

§ 6.1.3  Forest Subwatershed Integrity Areas
The Highlands Council has evaluated and assigned forest integrity valuations to each of the HUC14 subwatersheds of the Borough/Township/Town Highlands Area. These valuations appear in the map titled “Forest Subwatersheds” (Exhibit 23) which is herewith adopted and incorporated as a component of this Ordinance, inclusive of the applicable forest subwatershed integrity classes:

A.  **High Integrity Forest Subwatersheds.** High Integrity Forest Subwatersheds are predominantly forested and characterized by a high proportion of forest cover consisting of high value core area, large patch sizes and short distances between patches.

B.  **Moderate Integrity Forest Subwatersheds.** Moderate Integrity Forest Subwatersheds are predominantly forested, but do not exhibit a high proportion of high value core area, large patch sizes, or proximity between patches.

C.  **Low Integrity Forest Subwatersheds.** Low Integrity Forest Subwatersheds are predominantly non-forested or include low values for proportion of forest cover and patch size, or exhibit high distance to nearest patch.

§ 6.1.4  Clear-Cutting Prohibited
Clear-cutting is prohibited in any forested portion of the Highlands Area, whether the affected lands are delineated as Total Forest Area or Forest Resource Area, or consist of lands containing upland forest, as determined under the procedures provided at APPENDIX A.

§ 6.1.5  Preservation Area Standards

A.  **Prohibitions.** Any forest disturbance that by definition constitutes deforestation (see § 3.2), is prohibited within any portion of the Forest Resource Area, with the exception of that authorized under an HPAA issued by the NJDEP.
B. Allowances. Forest disturbance in the Forest Resource Area that does not by definition, constitute deforestation, shall be permitted in the Preservation Area only where authorized under an HPAA issued by the NJDEP, or where demonstrated to be the minimum required in connection with:

1. The maintenance of any legally pre-existing use or structure, expressly excluding the expansion of such use or structure except as provided under B.1, above; or

2. Either a permitted non-Major Highlands Development or the expansion of any legally pre-existing use or structure, where accompanied by submission, approval and implementation of a Forest Mitigation Plan designed to minimize the extent of forest disturbance, protect forest areas adjacent or proximate to the disturbance area, and mitigate for loss of trees or other forest vegetation removed during the course of such disturbance.

§ 6.1.6 Planning Area Standards
Disturbance (as defined at § 3.2) of any forested portion of the Planning Area shall be permitted only upon a finding by the reviewing board or other applicable municipal authority that the following requirements have been satisfactorily addressed:

A. Demonstration that the proposed disturbance can neither be avoided nor reduced in extent, while adequately providing for a proposed use that otherwise meets the requirements of this Ordinance;

B. Demonstration that the proposed disturbance will not diminish the forest integrity class (as indicated in the map of Forest Subwatersheds (Exhibit 23)) of any forested areas adjacent or proximate to the location of the proposed activity;

C. Incorporation of Low Impact Development techniques (see § 7.1) appropriate to the activity or development project proposed;

D. For any proposed disturbance other than that associated with the maintenance of a legally pre-existing use or structure (expressly excluding the expansion of any such use or structure), submission, approval and implementation of a Forest Mitigation Plan designed to minimize the extent of such disturbance, protect forest areas adjacent or proximate to the disturbance area, and mitigate for loss of trees or other forest vegetation removed during the course of such disturbance; and

E. Notwithstanding the preceding provisions, in the case of any proposed disturbance that by definition constitutes deforestation, submission, approval and implementation of a Forest Mitigation Plan designed to minimize the extent of deforestation, protect forest areas to remain, and restore or mitigate for forest area loss.

§ 6.1.7 Forest Impact Reports Required
With the exception of forest disturbance authorized pursuant to an HPAA issued by the NJDEP, any disturbance pursuant to § 6.1.5 or § 6.1.6, above, shall be approved only upon demonstration that the criteria required therein have been satisfied. In support of such proofs, a Forest Impact Report shall be submitted containing at minimum, the items listed herein.

DRAFT FOR MUNICIPAL REVIEW
-52-
A. **All Forest Impact Reports**

1. A map of upland forest area located on or within 500 feet of the subject property, as determined in accordance with Appendix A. A map indicating any on-site areas designated as Forest Resource Area (Exhibit 3) or Total Forest (Exhibit 22). Where access is not available to adjacent properties, the municipal Environmental Resource Inventory and any updated Highlands Council GIS data delineating the Forest Resource Area and Total Forest may be relied upon for off-site forest identification.

2. A description of the nature, density and intensity of the proposed use or activity.

3. A plan indicating the extent of the forest disturbance area, identifying the number, location, species and, for trees of greater than six (6) inches in caliper (measured at 4.5 feet above grade level), the caliper of any trees proposed for removal.

4. A description of the site alternatives analysis undertaken to, in this order: a) avoid forest disturbance; b) minimize forest disturbance; and c) ensure that any forest disturbance that cannot be avoided results in the least impact.

5. A description of the low impact development practices to be used to minimize the disturbance area and its impact; design details to be indicated in development plans, if applicable.

6. A description of the site and the type and integrity class of the existing forest areas proposed to be disturbed or potentially affected by disturbance of adjacent or proximate forest areas.

7. If the applicant proposes site-specific forest information, including information based on the method in APPENDIX A, that differs from mapped forest resources, the information must be provided in a format and with sufficient information that the findings may be submitted for verification by the Highlands Council as an RMP Update.

8. An analysis of the effects (direct and indirect) of the proposed use or activity upon forests, including the resulting integrity class of forest areas adjacent or proximate to the disturbance area.

B. **Deforestation Impact Reports.** In addition to the items required above for all Forest Impact Reports, any application proposing disturbance that by definition, constitutes deforestation, shall include:

1. A description of the area surrounding the subject property within a 0.5 mile radius.

2. A map of all forest resources, as described in the Environmental Resources Inventory, within a 0.5 mile radius of the property, including any areas designated as Forest Resource Area (Exhibit 3) or Total Forest (Exhibit 22).

3. A field survey and description of the local ecological community type(s) on the site and a description of the surrounding, macro-scale ecological community type(s) of which the property is part.

4. An inventory of forest community composition and stand structure. The inventory shall include a description of vegetation species richness, vegetation species composition, stand density and basal area, connectivity with surround forested lands, and the survey method.
5. An impact analysis documenting and describing any increase in forest fragmentation, creation of forest edge, disruption of forest area on steep slopes or riparian areas, or disruption of core forest areas that will occur as a result of the proposed use or activity.

§ 6.1.8 Forest Mitigation Plans
All Forest Mitigation Plans must be prepared by a State of New Jersey Approved Forester or other qualified professional. A Forest Mitigation Plan must include each of the components listed herein.

A. Mitigation Priority Area Map. Priority Areas are forested locations within the site having the highest ecological value to be targeted for conservation, restoration, or mitigation, including such areas as:
   1. Highlands Open Waters and Buffers
   2. Riparian Areas, including Floodplains and Floodprone Areas
   3. Critical Habitat
   4. Steep Slopes and Ridgelines
   5. Core Forests and Contiguous Forest Patches

B. Protection Plan. A plan providing the proposed methodology appropriate to, and by which the applicable mitigation priority areas will be protected throughout the period of forest disturbance and thereafter.

C. Forest Protection Plan. A plan incorporating pre-construction and construction best management practices to ensure the well-being of forest areas adjacent or proximate to the disturbance area. Such plans shall include prescribed limits of disturbance to be mapped, field marked, and provided with protective fencing prior to the start of any construction activity. Plans shall indicate installation of tree protection fencing along the drip line of trees to be protected, with instructions barring encroachment by machinery or heavy equipment of any kind, and requiring regular inspection and maintenance of fencing throughout the construction period.

D. Mitigation Description. A description of the proposed forest restoration, tree planting plan or other mitigation initiative proposed to provide equivalent or enhanced forest ecosystem benefit in consideration of the extent and type of disturbance or deforestation that would result if the use or activity is approved.

E. Planting Plan. A detailed plan indicating the specific plantings proposed for restoration, reforestation or mitigation, including size, species, quantity, location, separation distances, planting details, deer and pest management protections, and maintenance plans.

F. Maintenance Agreement. A minimum 3-year maintenance agreement that outlines care-taking responsibilities of the applicant once the proposed planting has been completed. The maintenance agreement must include monitoring of newly planted stands, provide for protection devices in working order for 3 years, and ensure at least a 75% survival rate after 3 years.
§ 6.2 HIGHLANDS OPEN WATERS & RIPARIAN RESOURCES

§ 6.2.1 Findings

Highlands Open Waters (Exhibit 4) include all springs, streams (including intermittent streams), wetlands and bodies of surface water, whether natural or artificial (excluding swimming pools), located wholly or partially within the boundaries of the Highlands Area. Highlands Open Waters contribute to the water resources of the Highlands Region, and ultimately to the water supply of millions of New Jersey citizens. They are essential to the ecologic function of the plant and animal communities of the Highlands Area that depend upon them for survival. Highlands Open Waters are also an important physical feature of the Borough/Township/Town, contributing to its character, aesthetics, history and development, and to its recreational opportunities.

Protection of Highlands Open Waters is vital not only to the municipality, but to the Highlands Region and the state of New Jersey. The provision or preservation/enhancement of buffer areas adjacent to Highlands Open Waters is an integral component to ensuring such protection. Key functional values that buffers provide or contribute to, include but are not limited to: habitat for flora and fauna, stormwater and flood water retention and filtration, water quality protection, temperature moderation, aquatic ecosystem integrity and channel integrity. Highlands Riparian Areas (Exhibit 5) are lands associated with and bordering on Highlands Open Waters, often extending beyond Highlands Open Water buffers. These lands are likewise essential to providing critical hydrologic, ecologic and pollutant attenuation functions for Highlands Open Waters. Riparian areas moderate fluctuations in water temperature, help maintain ground water recharge and stream base flow, stabilize stream banks, and provide flood storage areas. During high flow or overland runoff events, riparian areas reduce erosion and sediment loads to surface water and remove excess nutrients and contaminants from flood water. Riparian areas also provide habitat for a variety of animal species and support terrestrial and aquatic food webs through deposition of woody debris.

It is in the interest of the local community, the Highlands Region, and the state of New Jersey that the Highlands Open Waters of the Borough/Township/Town Highlands Area, including associated buffers and Riparian Areas, receive the highest level of protection possible. The map of Highlands Riparian Areas (Exhibit 5) includes all Highlands Open Waters and associated flood prone areas, riparian soils and wildlife corridors.

§ 6.2.2 Watershed Resource Value Areas

The Highlands Council has evaluated and assigned watershed resource valuations to each of the HUC14 subwatersheds of the Borough/Township/Town Highlands Area. These valuations appear in the Master Plan Highlands Element map titled “Watershed Values” (Exhibit 24) which is herewith adopted and incorporated as a component of this Ordinance, inclusive of the three watershed resource value classes listed below.

A. **High Resource Value Watersheds.** High Resource Value Watersheds contain predominantly forest lands, include a significant extent of high quality habitat, and have limited pre-existing developed land.

B. **Moderate Resource Value Watersheds.** Moderate Resource Value Watersheds contain forest lands and some habitat suitable for rare, threatened or endangered species, but typically also contain significant areas of developed lands.

C. **Low Resource Value Watersheds.** Low Resource Value Watersheds contain a low proportion of forest lands, low proportion of habitat suitable for rare, threatened or endangered species, and higher proportion of developed land area.
§ 6.2.3 Riparian Subwatershed Integrity Areas
The Highlands Council has also evaluated the HUC14 subwatersheds of the Highlands Area on the basis of Riparian Area integrity, which are divided amongst three classes, as listed below. These appear in the Master Plan Highlands Element map titled “Riparian Integrity” (Exhibit 25) which is herewith adopted and incorporated as a component of this Ordinance.

A. **High Integrity Riparian Area.** The High Integrity Riparian Area consists of subwatersheds having Riparian Areas that exhibit predominantly natural vegetation, including high quality habitat for water/wetland dependent species, and a generally low incidence of impervious area, agricultural uses and road crossings.

B. **Moderate Integrity Riparian Area.** The Moderate Integrity Riparian Area consists of subwatersheds having Riparian Areas that contain a higher incidence of impervious area, agricultural uses and road crossings, and a reduced proportion of natural vegetation providing high quality habitat for water/wetland dependent species.

C. **Low Integrity Riparian Area.** The Low Integrity Riparian Area consists of subwatersheds having Riparian Areas that contain a high proportion of impervious area, agricultural uses and road crossings, and minimal natural vegetation providing high quality habitat for water/wetland dependent species.

§ 6.2.4 Highlands Open Waters Protection Buffer
All Highlands Open Waters shall include a minimum 300-foot wide protection buffer, as measured from the edge of the discernable bank of the Highlands Open Waters feature, or from the centerline where no discernable bank exists. These buffers are included in the map of Highlands Open Waters at Exhibit 4 with respect to streams, rivers, ponds, lakes and reservoirs. With respect to wetlands and other Highlands Open Waters features not mapped in Exhibit 4 (e.g., seeps, springs), each shall include a 300-foot wide protection buffer measured from: for the Planning Area, a delineated wetlands line described in a Letter of Interpretation (LOI), or from a field-delineated boundary line for other features; or for the Preservation Area, a Highlands Resource Area Determination issued by the NJDEP.

§ 6.2.5 Highlands Open Waters Buffer Standards
Highlands Open Waters buffers shall be maintained in their undisturbed or pre-existing condition, unless a disturbance is approved in accordance with the provisions of this section.

A. **Pre-existing Structures or Improvements.** Any lawfully pre-existing structure or improvement located within a Highlands Open Waters protection buffer area as of the effective date of this Ordinance may remain and be maintained or rehabilitated, provided that the existing area of disturbance attributed to or associated with such structure or improvement shall not be increased.

B. **Agricultural & Horticultural Land Uses.** For purposes of this section, existing agricultural and horticultural uses, whether or not under active management or operation, shall not be included in any assessment of “previously disturbed” buffer areas with regard to proposals for non-agricultural development.

C. **Approvals Subject to Outside Agency Approvals.** Approval of any application involving the disturbance of a Highlands Open Waters buffer pursuant to this section shall not be construed to relieve the applicant from the applicable rules, regulations or legal requirements of any other agency having jurisdiction over such buffers, including but not limited to: the NJDEP (e.g., Freshwater Wetland Rules, N.J.A.C. 7:7, Stormwater Management Rules, N.J.A.C. 7:8, Flood Hazard Area Rules, N.J.A.C. 7:13, NJPDES Rules, N.J.A.C. 7:14A); a Soil Conservation District pursuant to its authority.  

**DRAFT FOR MUNICIPAL REVIEW**

-56-
under New Jersey Soil Erosion and Sediment Control Act Rules, N.J.A.C. 2:90; or any county or other regional entity having authority pursuant to a Regional Stormwater Plan adopted by NJDEP under N.J.A.C. 7:8 and N.J.A.C. 7:15.

D. **Municipal Stormwater Management Requirements.** Where the provisions of this section are in conflict with the provisions of an adopted municipal stormwater management ordinance [mention reference, if applicable, e.g., ordinance title, number, effective date], the more restrictive of the two shall apply.

E. **Stream Corridor Protection/Restoration Plan.** Where the provisions of this section are in conflict with the provisions of an adopted Stream Corridor Protection/Restoration Plan [mention reference, if applicable, e.g., plan title, date of adoption], the provisions of the adopted Plan shall override.

F. **Protection Buffer Expansion.** The provisions of this section shall not be construed to preclude the imposition of a wider protection buffer requirement where site-specific analysis and evaluation by a qualified professional indicates that such expansion is essential to the protection of Highlands Open Waters, associated Riparian Areas, or the habitat of water or wetlands-dependent species (particularly in the case of rare, threatened or endangered species) located therein.

G. **Preservation Area Standards.**

1. **Major Highlands Development.** Any disturbance of a Highlands Open Water buffer proposed in connection with a Major Highlands Development shall be authorized and regulated only by the NJDEP in accordance with NJDEP Preservation Area Rules (N.J.A.C. 7:38) and all other applicable requirements. The pertinent Preservation Area standards appear at G.3, below.

2. **Non-Major Highlands Development.** Any disturbance of a Highlands Open Water buffer proposed in connection with a development that does not constitute a Major Highlands Development shall meet the requirements provided at G.3, below (adapted from NJDEP Preservation Area Rules, N.J.A.C. 7:38), pursuant to the regulatory authority of this Ordinance and review by the appropriate municipal entity in accordance with the application procedures of Article 9.

3. **Disturbance Prohibited Except Linear Development.** Development is prohibited within all Highlands Open Waters and adjacent 300-foot buffers except for linear development, which shall be permitted only provided that there is no feasible alternative for the linear development outside the Highlands Open Waters or Highlands Open Water buffer.

   a) To address the “no feasible alternative for linear development” standard, the applicant shall demonstrate that there is no other location, design or configuration for the proposed linear development that would reduce or eliminate the disturbance to a Highlands Open Waters feature or the adjacent buffer. For proposed linear development that would provide access to an otherwise developable lot the applicant shall in addition, show that:

      (i) The proposed linear development is the only point of access for roadways or utilities to an otherwise developable lot; and

      (ii) Shared driveways are used to the maximum extent possible to access multiple lots.

   b) For a driveway, the applicant shall, in addition, demonstrate that:

**DRAFT FOR MUNICIPAL REVIEW**

-57-
The applicant has made a good faith effort to transfer development rights for the lot based on the allocation of Highlands Development Credits certified by the Highlands Development Credit Bank, and has not obtained a commitment from the Highlands Development Credit Bank, a willing buyer, or a TDR receiving zone municipality to purchase said Highlands Development Credits;

The lot has been offered for sale at an amount no greater than the specific fair market value to all property owners within 200 feet of the lot, and to the land conservancies, environmental organizations, the Highlands Council and all other government agencies on a list provided by the NJDEP (for Major Highlands Development) or the Highlands Council (for non-Major Highlands Development), at an amount determined in compliance with N.J.S.A. 13:8C-26j or N.J.S.A. 13:8C-38j, as applicable;

Said offering under G.3.b(ii) was made by letter sent by certified mail, return receipt requested, with a copy to the Highlands Council (using the form provided by the NJDEP for Major Highlands Development): a) disclosing the location on the lot of all Highlands resource areas (as defined in N.J.A.C. 7:38-1.4 for Major Highlands Development, or as provided by an RMP Consistency Determination Report developed using the Highlands Council website for non-Major Highlands Development); b) stating that an application to develop the lot has been filed; and c) enclosing a copy of a fair market value appraisal performed by a state-licensed appraiser based on the minimum beneficial economically viable use of the property allowable under local law; and

No reasonable offer for the lot has been received within a minimum period of 90 days.

d) An alternative shall not be excluded from consideration under this subsection merely because it includes or requires an area not owned by the applicant that could reasonably be obtained,
utilized, expanded or managed in order to fulfill the basic purpose of the proposed linear
development.

c) After consideration of the information required in 3a through 3d above, the NJDEP will not
issue an HPAA (for Major Highlands Development) and the reviewing municipal authority
shall not approve any application pursuant to this subsection if, either: the applicant has
refused a fair market value offer to purchase the property for which the driveway linear
development is sought, or the NJDEP (for Major Highlands Development) or reviewing
municipal authority (for non-Major Highlands Development), as applicable, finds that there is
a reasonable alternative to the proposed linear development.

H. Planning Area Standards.

1. Prohibitions. Disturbance of any portion of a Highlands Open Waters buffer is prohibited except as
provided at H.2, below, or where associated with an approved buffer restoration or enhancement
activity designed to improve the functional value of the buffer, in accordance with the parameters
listed at § 6.2.7, below.

2. Allowances. Disturbance of a Highlands Open Waters buffer shall be permitted only within
portions of such a buffer which have been previously disturbed, as demonstrated by submission of
a property survey including at minimum, the items listed at 2.a, below. For purposes of this
subsection, a previously disturbed buffer area is one in which one or more buffer functional values,
as listed at § 6.2.7 below, have been and remain compromised by prior development activity
(excluding agricultural or horticultural uses) as evidenced by the existence of buildings or other
structures (including parking areas and driveways, whether paved or gravel), and including
associated graded or compacted areas, areas stripped of natural vegetation, maintained lawn areas,
areas of fill or excavation, and other similar features. Any new disturbance of such previously-
disturbed areas shall occur only in accordance with the provisions of this subsection.

a) All applications proposing a buffer disturbance pursuant to this subsection shall be
accompanied by a property survey prepared by a licensed New Jersey Land Surveyor
indicating: the metes and bounds of the subject property; the location and dimensions of
existing buildings and other structures located thereon; the limits and extent of graded,
compacted, filled or excavated areas; the limits and extent of areas stripped of natural
vegetation, of maintained lawn areas; and any other site improvements provided in support of
the prior development. The full extent of the proposed area of new disturbance shall be clearly
indicated on the site or parcel plan submitted with the application, with the previously-
disturbed area(s) illustrated on the same sheet using shaded or shadow outline features.

b) Authorization for any new disturbance within a previously-disturbed area shall be approved
only upon a finding by the reviewing board or other applicable municipal authority that the
proposal meets the following requirements:

(i) The proposed new disturbance will occur fully within the previously-disturbed area(s), as
evidenced by both the property survey and the plan proposal submitted in support of the
application;

(ii) The proposal incorporates measures that will enhance the functional value of the affected
buffer area by means such as, but not limited to: reducing impervious coverage, replacing
maintained grass lawns with naturalized areas, upgrading soil erosion and sedimentation
controls, and providing for planting of native trees, grasses, or other vegetation appropriate to the riparian environment that support the functions of the Highland Open Waters buffer;

(iii) The proposal incorporates Low Impact Development techniques (see § 7.1) appropriate to the nature of the activity and the riparian aspects of the buffer area in question; and

(iv) The proposed plan will enhance one or more of the buffer functions listed at § 6.2.7, below; will result in no net loss of any one of the listed buffer functions; and will provide an overall improvement in the functional value of the affected buffer area, when compared to pre-existing conditions.

c) The allowances of this subsection shall not be construed to authorize improvements or development activity of any kind within any portion of a Highlands Open Waters buffer if the previously-disturbed area, or any portion thereof, is found to be the result of unlawful activity.

§ 6.2.6 Riparian Area Standards
The provisions of this subsection shall apply only to those portions of the Riparian Area that extend beyond the limits of designated Highlands Open Waters and associated 300-foot Highlands Open Waters buffers. These provisions shall apply in all portions of the Highlands Area.

A. Protection Zone and Wildlife Management Sub-Zone.

1. Prohibitions. Disturbance of any portion of a Highlands Riparian Area is prohibited except as provided at A.2, below, or where associated with an approved Riparian Area restoration or enhancement activity designed to improve the functional value of the Riparian Area, in accordance with the parameters listed at § 6.2.7, below.

2. Allowances. Disturbance of a Highlands Riparian Area shall be permitted only within portions of such Areas which have been previously disturbed, as demonstrated by submission of a property survey in accordance with 2.a, below. For purposes of this subsection, a previously disturbed Riparian Area is one in which one or more functional values, as listed at § 6.2.7 below, have been and remain compromised by prior development activity (excluding agricultural or horticultural uses) as evidenced by the existence of buildings or other structures (including parking areas and driveways, whether paved or gravel), and including associated graded or compacted areas, areas stripped of natural vegetation, maintained lawn areas, areas of fill or excavation, and other similar features. Any new disturbance of such previously-disturbed areas shall occur only in accordance with the provisions of this subsection.

a) All applications proposing a Riparian Area disturbance pursuant to this subsection shall be accompanied by a property survey prepared by a licensed New Jersey Land Surveyor, including each of the items listed at § 6.2.5 H.2.a, above for Highlands Open Waters buffers, and a parcel or site plan indicating the full extent of the proposed new disturbance, with the previously-disturbed area(s) illustrated on the same sheet using shaded or shadow outline features.

b) Authorization for any new disturbance within a previously-disturbed area shall be approved only upon a finding by the reviewing board or other applicable municipal authority that the proposal meets the criteria listed at § 6.2.5 H.2.b, above, with all requirements applicable to buffers therein applied instead to Riparian Areas.
c) The allowances of this subsection shall not be construed to authorize improvements or development activity of any kind within any portion of a Highlands Riparian Area if the previously-disturbed area, or any portion thereof, is proven to be the result of unlawful activity.

B. All Other Zones and Sub-Zones.

1. High and Moderate Integrity Riparian Areas. Disturbance shall be permitted only upon a finding by the reviewing board or other applicable municipal authority that the application includes or satisfactorily addresses each of the following requirements:

a) Demonstration that the proposed disturbance can neither be avoided nor reduced in extent or loss of quality, while adequately providing for the proposed use;

b) Demonstration that the proposed disturbance will result in no net loss of the quality of adjacent Highlands Open Waters, in accordance with § 6.2.7, below;

c) Demonstration that the proposed improvement plan minimizes impacts to the other functional values of the affected Riparian Area, as provided at § 6.2.7, below;

d) Incorporation of Low Impact Development techniques (pursuant to § 7.1) appropriate to both the proposed activity and the riparian nature of the site, and designed to minimize Riparian Area disturbances while maximizing retention of natural features and Riparian Area functional value; and

e) Submission, approval and implementation of a Riparian Area Mitigation Plan providing for restoration of impaired Riparian Areas located either, or in combination, in the following order of preference: on the site of the proposed disturbance, within the same HUC14 subwatershed as the site of the proposed disturbance, within the nearest interrelated HUC14 subwatershed having impaired or disturbed areas in need of restoration, or within the nearest unrelated HUC14 subwatershed having impaired or disturbed areas in need of restoration. Mitigation shall at minimum, be commensurate in scale, effect and extent with the disturbance approved pursuant to this subsection. A Mitigation Plan pursuant to this subsection shall be approved only where it provides improvements to one or more Riparian Area functions, as listed at § 6.2.7, below, while ensuring no net loss in the quality or contributory effect of an existing function.

2. Low Integrity Riparian Areas. In the case of any Riparian Area that is determined through a functional value assessment performed in accordance with the parameters at § 6.2.7, below, to contribute significantly to the protection of a Highlands Open Waters feature, any proposed disturbance shall occur only in accordance with the provisions at § 6.2.6 B.1, above, for High and Moderate Integrity Riparian Areas. Disturbance of any other Riparian Areas shall be permitted contingent upon satisfaction of § 6.2.6 B.1.d through B.1.e, above.

§ 6.2.7 Functional Value Assessment Required
Prior to the approval of any application proposing disturbance of a Highlands Open Waters buffer (with the exception of any Major Highlands Development approved pursuant to § 6.2.5 G.1, above) or of a Highlands Riparian Area regulated at § 6.2.6 above, a functional value assessment shall be performed to indicate the health and contributory value of the buffer or Riparian Area under existing conditions. All such assessments shall be completed by a qualified professional and shall include a general description and evaluation of each of

DRAFT FOR MUNICIPAL REVIEW

-61-
the components listed herein below. In addition, assessments shall provide a net gain/loss projection concerning each of the functional values, as applicable, based upon anticipated post-disturbance conditions. Such projections shall take into account all facets of the proposed application to determine anticipated impacts, whether beneficial or detrimental to functional values. Key functional values include but are not limited to habitat, stormwater and flood water retention and filtration, water quality protection, temperature moderation, aquatic ecosystem integrity and channel integrity.

A. **Habitat.** A reduction in aquatic habitat functional value will occur in the event of a net loss of in-stream food sources or of access to such sources. A loss of terrestrial habitat functional value will occur in the event of a shift to a less valuable overall vegetative condition based on the following hierarchy from highest value to lowest: forest or wetland, scrub/shrub, pasture or meadow, agriculture, maintained lawn, unpaved impervious surface, other structures.

B. **Water Quality.** A degradation of this functional value will occur if, as a result of the proposed land conversions, pollutant loads increase to the Highlands Open Waters.

C. **Temperature Moderation.** A loss in temperature moderation functional value will occur if changes to the existing vegetation result in reduced shading of the Highlands Open Waters feature or of increased stormwater that discharges to Highlands Open Waters. Further, a loss in temperature moderation functional value may occur with the heating of stormwater by new structures and other impervious surface. Mitigation approaches include removing or relocating impervious surfaces away from the Highlands Open Water or ensuring that stormwater temperature is reduced through shading or other techniques.

D. **Channel Integrity.** A loss of channel integrity functional value will occur if the project will result in: the loss of bank stabilizing vegetation; an increase in the peak rate of stream flow, or in localized scour potential, which will increase stream bank and stream bed erosion; or the removal or burial of aquatic habitat in any substantial part of a stream bed.

§ 6.3 **STEEP SLOPES**

§ 6.3.1 Findings
Disturbance of steep slopes can trigger soil erosion and sedimentation, resulting in the loss of topsoil. Steep slope disturbance can contribute to siltation of wetlands, lakes, ponds and streams, which damages and degrades wetland and aquatic habitats. Steep slope disturbance can also result in alteration of drainage patterns, which when severe, can result in land slumping and landslides. Protection of steep slope areas is essential to the safety and stability of the human and non-human environment. Avoiding disturbance of steep slopes protects surface water quality, plant and wildlife habitat, and habitat quality. It also protects ridgelines, hillsides, and mountainous features that provide variation in the landscape, contribute to scenic viewsheds, offer unique recreational opportunities, and in many instances, define the character of an area or region.

The severity and extent of steep slopes, in conjunction with applicable soil characteristics and type and extent of land cover, all affect the potential for damages from the disturbance of steep slopes. The provisions of this section are intended to protect the citizens, buildings and structures, and the natural environment and living ecosystems of the community from harm due to disturbance of steep slopes.

§ 6.3.2 Applicability
The provisions of this section shall apply to the Steep Slope Protection Area (Exhibit 6) and to any other portion of the Highlands Area determined to consist of 5,000 square feet or more of contiguous steep
slope(s) (as defined at § 3.2). For purposes of making such determinations, slopes shall be calculated for every two-foot contour interval over the full extent of the existing slope features, regardless of the location of property or other jurisdictional boundary lines. These provisions shall apply to the Planning Area, to any project, development or activity not classified as Major Highlands Development in the Preservation Area, and, to the extent more restrictive or encompassing than NJDEP Preservation Area Rules (see N.J.A.C. 7:38-3.8, “Steep slopes”), to Major Highlands Development in the Preservation Area.

§ 6.3.3 Steep Slope Standards

A. **Severely and Moderately Constrained Slopes.** Disturbance of Severely Constrained and Moderately Constrained Slopes is prohibited, with the exception of that required in connection with a linear development. Such linear development, however, shall be permitted only in the event that there is no feasible alternative for such development outside of the Severely Constrained or Moderately Constrained Slopes.

1. To address the “no feasible alternative for linear development” standard, the applicant shall demonstrate that there is no other location, design or configuration for the proposed linear development that would reduce or eliminate the disturbance of Severely Constrained or Moderately Constrained Slopes. For proposed linear development that would provide access to an otherwise developable lot the applicant shall in addition, show that:

   a) The proposed linear development is the only point of access for roadways or utilities to an otherwise developable lot; and

   b) Shared driveways are used to the maximum extent possible to access multiple lots.

2. For a driveway, the applicant shall, in addition, demonstrate that:

   a) The applicant has made a good faith effort to transfer development rights for the lot based on the allocation of Highlands Development Credits certified by the Highlands Development Credit Bank, and has not obtained a commitment from the Highlands Development Credit Bank, a willing buyer, or a TDR receiving zone municipality to purchase said Highlands Development Credits;

   b) The lot has been offered for sale at an amount no greater than the specific fair market value to all property owners within 200 feet of the lot, and to the land conservancies, environmental organizations, the Highlands Council and all other government agencies on a list provided by the Highlands Council, at an amount determined in compliance with N.J.S.A. 13:8C-26j or N.J.S.A. 13:8C-38j, as applicable;

   c) Said offering under A.2.b was made by letter sent by certified mail, return receipt requested, with a copy to the Highlands Council: a) disclosing the location on the lot of all Highlands resource areas as provided by an RMP Consistency Determination Report developed using the Highlands Council website; b) stating that an application to develop the lot has been filed; and c) enclosing a copy of a fair market value appraisal performed by a state-licensed appraiser based on the minimum beneficial economically viable use of the property allowable under local law;

   d) No reasonable offer for the lot has been received within a minimum period of 90 days.
3. Documentation required toward satisfaction of the provisions of 2.b through 2.d preceding, shall include:

   a) A list of the names and addresses of all owners of real property within 200 feet of the lot, as certified by the municipality, including owners of easements as shown on the tax duplicate;

   b) A copy of each letter that the applicant sent under this subsection;

   c) Receipts indicating that the letters were sent by certified mail;

   d) A copy of all responses received. Each response shall be submitted to the reviewing municipal authority at the time of the application seeking approval for the proposed disturbance;

   e) A copy of the fair market value appraisal sent to all property owners within 200 feet as required under 2.c above; and

   f) A copy of a written response or a resolution from the Highlands Council demonstrating that it has considered and rejected the offer.

4. An alternative shall not be excluded from consideration under this subsection merely because it includes or requires an area not owned by the applicant that could reasonably be obtained, utilized, expanded, or managed in order to fulfill the basic purpose of the proposed linear development.

5. After consideration of the information required in A.1 through A.4 above, the reviewing municipal authority shall not approve any application pursuant to this subsection if, either: the applicant has refused a fair market value offer to purchase the property for which the driveway linear development is sought, or the reviewing municipal authority finds that there is a reasonable alternative to the proposed linear development.

B. Constrained or Limited Constrained Slopes. Disturbance shall be permitted only upon a finding by the reviewing board or other applicable municipal authority that the application includes or satisfactorily addresses each of the requirements following:

1. Demonstration that the proposed steep slope disturbance can neither be avoided nor reduced in extent, while adequately providing for the proposed use.

2. Incorporation of Low Impact Development techniques (pursuant to § 7.1) appropriate to both the proposed activity and the steep slope environment, designed to reduce the extent of disturbance areas, stabilize areas that are disturbed, provide for stormwater management, and protect adjacent areas during site construction.

3. Development layout shall be designed to:

   a) Minimize the need for landform grading and retaining structures;

   b) Incorporate a cluster development format, where feasible, to minimize the extent of development on steep slopes; and

   c) Disturb steep slopes (where such disturbance cannot be avoided) having the minimum potential for slope instability.

DRAFT FOR MUNICIPAL REVIEW

-64-
4. Site design shall:
   a) Incorporate stabilization techniques that emphasize bioengineering;
   b) Ensure minimized soil loss during and after construction through steep slope-appropriate soil
      erosion and sediment control techniques;
   c) Prevent direct discharge of stormwater into streams or other Highlands Open Waters features;
   d) Provide for control of stormwater velocity and volume such that no net increase in run-off
      rates occurs between pre- and post-conditions; and
   e) Provide for maximum protection of existing trees, woodlands and surrounding natural
      vegetated areas.

§ 6.4 CRITICAL HABITAT

§ 6.4.1 Findings
Habitat protection is critical to maintaining biodiversity and providing for the needs of rare, threatened
and endangered plant and animal species. Biodiversity is the variety of plant species, animal species and all other
organisms found in a particular environment, and is a critical indicator of ecological integrity. This Ordinance
establishes three categories of Critical Habitat in the Highlands Area, as set forth at § 4.3.5, above. Critical
Wildlife Habitat includes lands containing habitat for rare, threatened and endangered wildlife species.
Significant Natural Areas are those Natural Heritage Program (NHP) Priority Sites within the Highlands
Region that are regionally significant due to the presence of either rare or endangered plant species or of
unusual or exemplary natural ecological communities. Vernal pools are unique ecosystems that provide
critical breeding habitat for a variety of amphibian and invertebrate species; contribute to local biodiversity by
supporting plants, animals and invertebrates that would otherwise not occur in the landscape; and contribute
significant amounts of food to adjacent habitats.

Protection of Critical Habitat is essential to the well-being of a wide variety of plants and animals making up
the unique ecosystems of the Highlands Area. Such protection is vital to the survival of numerous rare,
threatened and endangered species. Protection of Critical Habitat is in the interest of the
Borough/Township/Town and the Highlands Region, as a whole, not only for its contributions to ecosystem
stability and biodiversity, but for its role in the health and stability of the human environment, and its
contributions to aesthetic values.

§ 6.4.2 Disturbance Prohibited
Disturbance of any portion of any lands located within designated Critical Habitat areas of the Highlands
Area, including Critical Wildlife Habitat (Exhibit 7), Significant Natural Areas (Exhibit 8), and Vernal Pools,
including the 1000-foot protection buffer, (Exhibit 9), is prohibited, with the exception only of such
disturbance as may be authorized by the NJDEP through issuance of an HPAA for Major Highlands
Development in the Preservation Area. Until or unless the municipality has adopted a Habitat Conservation
and Management Plan (see § 6.4.3), relief from this provision shall remain under the sole authority and
jurisdiction of the New Jersey Highlands Council. Any application proposing disturbance of Critical Habitat
shall be neither deemed complete, nor reviewed or considered by the municipal Board or other applicable
authority, until such time as authorization has been obtained from the Highlands Council in the form of a
formal notification from the Executive Director of the Highlands Council, indicating by reference to

DRAFT FOR MUNICIPAL REVIEW

-65-
specified plan drawings (including date, title, plan sheet number(s), and plan preparer) that the limits and extent of the disturbance proposed within the application has been approved.

§ 6.4.3 Habitat Conservation and Management Plan
Upon Borough/Township/Town adoption of a Habitat Conservation and Management Plan, which, inclusive of any accompanying ordinances, rules or regulations, shall be approved by the Highlands Council, all applications proposing disturbance of a Critical Habitat area shall be filed, reviewed and considered in accordance with the provisions and criteria provided therein.

§ 6.5 CARBONATE ROCK

§ 6.5.1 Findings
The Carbonate Rock Area identifies portions of the Highlands Area underlain by carbonate bedrock or known to contain karst topography. Solution (by water) of carbonate rocks such as limestone and dolomite by surface water or ground water can cause surface depressions and development of irregular, sub-surface rock topography known as karst. These conditions make such areas unstable and susceptible to subsidence and surface collapse. Karst conditions can lead to formation of sinkholes, sinking streams, enlarged bedrock fractures, caves and underground streams. Sinkholes function as funnels, directing surface water runoff into karst aquifers with little or no attenuation of transported contaminants. Stormwater basins, septic system leach fields, sewers, agricultural runoff, lawn runoff, underground pipelines, and soil disturbance all can contribute contaminants directly to ground water through karst features. Soils in sinkhole bottoms may be thin or non-existent. In addition to potential for ground water contamination, karst features present a threat to public safety. Sinkholes and other karst formations can undermine buildings and structures, including infrastructure facilities, such as roads, natural gas lines, water supply and sewer lines, septic systems and stormwater basins.

The provisions of this section are intended to protect the citizens, buildings and structures, and the natural environment, particularly the ground water resources of the Highlands Area from the potential for harm or physical damage associated with land development in the Carbonate Rock Area.

§ 6.5.2 Applicability
The provisions of this section shall apply to all proposed development in the Carbonate Rock Area (Exhibit 10), including that in both the Preservation Area and the Planning Area.

§ 6.5.3 Geotechnical Investigation Required
Any Application for Development within the limits of the Carbonate Rock Area shall be preceded by a Geotechnical Investigation, as provided in this subsection. No such development application shall be deemed complete or considered for review by the applicable land use board or other designated municipal authority until such time as the Geotechnical Investigation program described herein has been satisfactorily completed, as certified by the individual(s) designated to review and make such findings on behalf of the municipality (see C., below).

A. Purpose. The purpose for the Geotechnical Investigation is to locate karst features that may be affected by the development proposal, to reveal the potential threats to public health, safety or welfare, or ground water quality that may result, and to determine the most appropriate ways to address these issues in the design and implementation of the project proposal.
B. **Professional Required.** The Geotechnical Investigation must be conducted by a qualified professional, such as geologist, soils or geotechnical engineer, or other licensed professional engineer having experience in karst area investigations and associated development.

C. **Municipal Review.** Review and oversight of Geotechnical Investigations shall fall under the purview of the Municipal Engineer. For purposes of this subsection, the “Municipal Engineer” shall refer to the qualified professional engineer or geological expert designated by the municipality to provide review and recommendations concerning matters of a geotechnical nature.

D. **Program.** The investigation shall occur in two phases, wherein the results of the first shall determine the need for and extent of requirements, pertinent to the second.

1. **Phase I Investigation.**

   a) The investigation shall commence with completion of a Phase I Geological Investigation which shall identify the geologic nature of the materials underlying the site. This assessment shall be based on review of existing available information, such as prior investigation reports on properties proximate to the subject parcel(s), aerial photography, as well as on-site field investigation.

   b) Phase I findings shall be provided in a summary report including: a description of the site geology; ground water conditions such as depth to water table and direction of flow; an evaluation of the potential impact of the project on ground water quality; and identification of any karst features observed. In addition, the report shall include the geological professional’s recommendations as to whether, in light of the proposed development plan, a Phase II Geological Investigation should be prepared and submitted, and whether any portion of the requirements of the Phase II Investigation should be waived.

   c) The applicant’s geological professional and the Municipal Engineer shall review the applicant’s Phase I findings in the field.

   d) The Municipal Engineer shall determine whether a Phase II Investigation shall be required, based on the data submitted and the recommendation of the applicant’s geological professional. The Municipal Engineer may grant a waiver from parts of the Phase II geotechnical evaluation or from part or all of the reporting requirements if in his/her professional opinion, such aspects are not relevant or necessary in formulating the proposed development plan for the site or property in question.

   e) In the event that a Phase II Investigation is not required, the Municipal Engineer shall provide written certification that the applicant has satisfactorily completed the requirements of the Geotechnical Investigation. Such certification shall include any conditions pertinent to the issuance of such certification that the Municipal Engineer may deem necessary or appropriate to ensure the geotechnical sufficiency of the proposed development plan. All materials developed in the course of the Phase I Investigation, inclusive of the Municipal Engineer’s evaluation report(s) and recommendations, shall be provided to the municipal board or authority having jurisdiction over the development application.
2. **Phase II Investigation.**

   a) The purpose of the Phase II Investigation is to delineate and define karst features noted or suspected in the Phase I Geological Investigation, to evaluate the effects of those features on the proposed development, and to propose methods of protection and mitigation if needed.

   b) A Phase II Investigation Plan shall include a narrative describing the types of features to be investigated, their locations, the types of direct/indirect methods to be used and the reasons for their use. Indirect methods include the use of aerial photography, satellite imagery and geophysical procedures, such as ground penetrating radar, electrical conductivity, electrical resistivity, magnetic field, very low frequency measurement, gravity field recording and seismic velocity measurements. Direct methods shall include test pits, test probes, test borings or other appropriate methods. A plan indicating the areas of investigation, proposed locations of testing and types of testing shall accompany the Phase II Investigation Plan.

   c) After the Phase II Investigation Plan has been approved by the Municipal Engineer, formal notification shall be issued to the applicant authorizing the commencement of the testing procedures. The development site shall be subject to inspection by the Municipal Engineer or designated municipal inspectors at any time. All testing data and results shall be made available to municipal officials and inspectors upon request. Any samples taken shall be properly preserved and shall be available for examination by the Municipal Engineer until final action is taken by the approval authority on the application.

   d) At the completion of the Phase II Investigation, a formal Geotechnical Evaluation Report shall be submitted which shall include a geologic interpretation of the observed subsurface conditions, including soil and rock type, geologic unit, jointing, faulting, voids, fracturing, grain size and sinkhole formation. In addition:

   (i) The Report shall provide all information gathered in the course of the testing protocol, including, as applicable: logs of all borings, test pits, and probes including evidence of cavities; loss of drilling fluid circulation during drilling; voids encountered and similar cavities; type of drilling or excavation technique employed; drawings of monitoring or observation wells as installed; time and dates of explorations and tests; reports of chemical analyses of on-site surface and ground water; names of individuals conducting tests if other than the applicant’s designated professional; analytical methods used on soils, water samples, and rock samples; a 1" = 100’ scale topographic map of the site (at a contour interval of two feet) locating all test pits, borings, wells, seismic or electromagnetic conductivity or other geophysical surveys; and analysis of the ground water including any potentiometric maps constructed from site data or aquifer tests with rate and direction of flow.

   (ii) The Report shall include an evaluation of the geotechnical findings in relation to the proposed development, and recommendations for the planning, engineering design and construction techniques to be utilized in accomplishing the project. All design recommendations shall minimize, to the greatest extent practical, impacts upon water quality and structural hazards associated with carbonate rock formations. The engineering solutions proposed to minimize environmental and structural impacts must be clearly detailed.
e) The Municipal Engineer shall consider the data, formal reports, maps, drawings and related submission materials and determine whether the proposed design satisfactorily provides:

(i) Sufficient design, construction and operational information to ensure that the proposed development of the tract will not adversely affect the health, safety and welfare of the community;

(ii) Proof that the proposed method of development of the tract will minimize any adverse effects on the quality of surface or subsurface water, and will not alter the character of surface and/or subsurface water flow in a manner detrimental to known on-site or off-site conditions;

(iii) Specific details insuring that design concepts and construction and operational procedures intended to protect surface and subsurface waters will be properly implemented; and

(iv) Specific details on inspection procedures to be followed during construction and after project completion.

f) The Municipal Engineer shall, within 45 days of submission of the Phase II Geotechnical Evaluation Report, provide the applicant with a written response, evaluating the adequacy of the Investigation, the sufficiency of information to make the necessary findings, and a review and recommendations, if any, concerning the geotechnical aspects of the proposed development plan and associated construction and mitigation techniques.

g) Upon a finding of sufficiency, the Municipal Engineer shall certify that the applicant has satisfactorily completed the Geotechnical Investigation, and all materials developed in the course of the Investigation process, inclusive of the Municipal Engineer’s evaluation report(s) and recommendations, shall be provided to the municipal board or authority having jurisdiction over the development application.

§ 6.5.4 Carbonate Rock Drainage Area
Applicants seeking approval of development activities in subwatersheds that drain directly to the Carbonate Rock Area shall conduct a Phase I Geological Investigation. The Phase I investigation and Municipal Engineer’s review shall ensure that any proposed development activity having potential to alter the types, volumes, or rates of runoff entering the Carbonate Rock Area, shall be designed to prevent the formation or enlargement of sinkholes, the introduction of contaminated surface water into ground water aquifers via sinkholes or cavities, or the lowering of the water table.

§ 6.5.5 Conditions of Development Application Approval
Where a Geotechnical Investigation is required in connection with a development application that will subsequently be filed with the Planning Board or Zoning Board of Adjustment, the Municipal Engineer shall provide recommendations to the Board concerning the application during the course of its review and decision making. For all other applications requiring a Geotechnical Investigation, the recommendations and requirements of the Municipal Engineer shall have final force and authority and shall be incorporated into any approval issued by the reviewing authority.

A. In no case shall an Application for Development, in either the Carbonate Rock Area or in a subwatershed that drains directly to the Carbonate Rock Area, be approved unless the applicant has demonstrated to the satisfaction of the reviewing board or other municipal authority (in consultation with the Municipal Engineer) that all potential hazards to public health and safety, structures and
ground water are fully addressed and mitigated, with the maximum emphasis given to nonstructural measures, including, but not limited to avoidance of modifications to the karst features.

B. The following conditions shall accompany the approval of any Application for Development in the Carbonate Rock Area:

1. The location of all sinkholes, disappearing streams or karst features shown on documents submitted under the Phase I and/or Phase II Geologic Investigations shall be drawn on all preliminary and final plats, site plans and parcel plans. These shall also note any site remediation techniques to be utilized to stabilize any solution channels or subsidence karst features.

2. In the event a previously unidentified carbonate rock feature posing a geologic hazard is discovered during construction, the applicant shall:
   a) Report the occurrence of the hazard to the Municipal Engineer within twenty-four (24) hours of discovery;
   b) Halt construction activities which would affect the geologic hazard;
   c) Prepare a report on the geologic hazard which analyzes the impact of the hazard and details a remediation plan for review and approval by the Municipal Engineer;
   d) After obtaining approval from the Municipal Engineer, perform necessary remediation of the hazard to prevent or minimize damage to buildings, structures, utilities, driveways, parking areas, roadways and other site improvements, and to minimize pollution of the ground water;
   e) Repair any damage to improvements and restore ground cover and landscaping;
   f) In those cases where the hazard cannot be repaired without adversely affecting the site plan or subdivision, the applicant shall file an amended application for a site plan or subdivision approval in compliance with the provisions of the municipal ordinances.

§ 6.6 LAKE MANAGEMENT AREA

§ 6.6.1 Findings
The Lake Management Area (Exhibit 11) contains all lakes located within the Highlands Area that have a surface area greater than ten (10) acres. Highlands Area lakes contribute to the character and natural beauty of the Borough/Township/Town, comprising a unique feature that is important to both the community and the surrounding region. Highlands Area lakes provide important recreational opportunities, support aquatic ecosystems, and moderate local atmospheric temperatures. Lakes represent an important interconnection in the wider system of rivers, streams and underground springs and aquifers that support life and contribute to community water supplies. Lakes can be harmed by pollutant sources in the watershed area draining to them. Polluted lakes can, in turn, damage downstream streams and rivers. Overdeveloped, damaged and poorly managed shore land areas can degrade water quality, harm lake ecosystems, diminish natural aesthetic values, and cause an overall loss of property values for lake communities. It is the intent of the provisions of this section to ensure that Highlands Area lakes receive the highest level of protection while at the same time providing for recreational access and opportunity, and development and redevelopment activities that are compatible with and appropriate to lake environments.

DRAFT FOR MUNICIPAL REVIEW

-70-
§ 6.6.2 Shoreland Protection Tier

A. *Highlands Open Waters Buffer Rules Apply.* The Shoreland Protection Tier encompasses the lands surrounding a Lake Management Area lake that lie within 300 feet of its shoreline. As such, these lands coincide with and are defined as Highlands Open Waters buffers pursuant to § 6.2.5, above. All provisions applicable to Highlands Open Waters buffers as provided therein, shall apply fully to the Shoreland Protection Tier of any lake in the Lake Management Area.

B. *Planning Area, Previously Disturbed Areas.* Where an applicant proposes a disturbance pursuant to § 6.2.5 H.2., above, the following additional parameters shall apply:

1. **Protection and Conservation Zones.** Where the application involves alteration of a previously disturbed shoreline, it shall be authorized only where demonstrated that the disturbance is the minimum necessary to provide for a water-dependent recreational use such as a beach, dock, fishing pier, or boat house. In no case shall such alteration encompass more than 10% of the shoreline existing on the subject property or 25 feet of shoreline, whichever is the greater.

2. **Lake Community Sub-Zone.** Where the application involves alteration of a previously disturbed shoreline, it shall be authorized only where demonstrated that the disturbance is the minimum necessary to provide for a water-dependent recreational use such as a beach, dock, fishing pier, or boat house. In no case shall such alteration encompass more than 10% of the shoreline existing on the subject property or 25 feet of such shoreline, whichever is the lesser.

   a) Where shorelines have already been developed using “hardscape” materials such as bulkheads, rip-rap or walls, new development or redevelopment shall include a vegetated filter strip along the shoreline to attenuate stormwater flow and minimize the potential for shoreline erosion, wherever feasible.

3. **All Zones and Sub-Zones.**

   a) The control and where necessary, removal of algae and non-native invasive aquatic weeds that cause nuisance conditions for lake users shall be permitted in all Zones and Sub-Zones, subject to NJDEP requirements.

   b) Where emergent aquatic vegetation exists, or may exist where there is little or no natural wave action, disturbance to reeds and other wetland species that are rooted below the high water mark shall be avoided, or where avoidance is infeasible shall be minimized and mitigated. Mitigation measures shall result in a return to conditions as near a natural condition, as practicable. In circumstances where the previously existing condition is degraded (for example, an instance where the wetland species are invasive such as common reed), the proposed plan shall provide a net gain in habitat value of the replanted species.

   c) Existing, natural shoreline vegetation within 50 feet of the shoreline shall be protected and preserved except for a minimum area permitted for water dependent recreational facilities or for the removal of exotic, invasive species and their replacement with native species. Restoration of native vegetation shall be required where development is proposed on property with existing disturbed areas within 25 feet of the shoreline.
d) Construction of new structures within previously disturbed portions of the Shoreland Protection Tier, other than water-dependent recreational facilities, is prohibited within fifty (50) feet of the shoreline.

e) Installation of any new on-site septic system within previously disturbed portions of the Shoreland Protection Tier shall incorporate a minimum setback of 150 feet from shoreline, regardless of whether another potential area of disturbance exists at a lesser setback.

f) The width and length of piers and docks shall minimize the disturbance of shoreline, shoreline vegetation and wetland vegetation to the extent feasible with due consideration for safety. Piers and docks may be held in common to reduce the total number of new docks and piers.

g) Boat lifts shall be preferred over structural docks and landing as a means of providing more light to the waters below and shall elevate boats a minimum of one foot above high water.

§ 6.6.3 Water Quality Management Tier
Any application proposing a disturbance within the Water Quality Management Tier shall be authorized only provided the reviewing board or other applicable municipal authority finds that the proposal protects lake water quality, by implementation of the requirements of this subsection. The Water Quality Management Tier consists of all lands within 1,000 feet of the shoreline of all Highlands lakes, subsuming the whole of the Shoreland Protection Tier. As such, these provisions shall not be construed to waive or obviate the requirements of either the preceding section § 6.6.2, or of § 6.2.5 above concerning Highlands Open Waters buffers. These provisions shall apply to any proposed disturbance in the Planning Area, to any project, development, or activity not classified as Major Highlands Development in the Preservation Area, and, to the extent more restrictive or encompassing than NJDEP Preservation Area Rules (including but not limited to N.J.A.C. 7:38-3.6, “Highlands open waters,” N.J.A.C. 7:38-3.7, “Flood hazard areas”), to Major Highlands Developments in the Preservation Area.

A. Water Quality Protection Requirements. To prevent or minimize continuous pollutant sources that can contribute pollutants overland or through ground water to the lake from greater distances than the Shoreland Protection Tier, the following measures shall be incorporated into all development proposals:

1. All disturbed parcels shall be provided with landscape or garden elements which retain stormwater, minimizing the potential for increases in the volume, time of concentration, or concentrated flow of runoff from the property. Such elements shall be designed to ensure to the maximum extent feasible, that during larger storms, water is released through overland sheet flow across a vegetated, naturally landscaped area.

2. All new development shall direct runoff from roofs, driveways and patios into landscape or garden elements which retain and filter stormwater, or to infiltration basins, trenches or other such devices.

3. Impervious surfaces shall drain away from the shoreline and from direct drainage to stormwater infrastructure that discharges directly to the lake to the maximum extent feasible.

4. Stormwater shall be directed to a stormwater treatment train that cleans and reduces the rate of runoff to the maximum extent possible. Stormwater treatment trains shall maximize the use of swales with natural vegetation, infiltration mechanisms or constructed wetlands, and discharge through a constructed wetland or other channel that maximizes aeration and cleaning of water to the maximum extent feasible.
5. The discharge of stormwater shall be through sheet flow, where feasible, which may require the construction of an outlet that disperses the water over a substantial distance at a constant elevation so that water sheet flows over the top.

B. Approvals Subject to Outside Agency Approvals. Nothing herein shall be construed to relieve the applicant from the applicable rules, regulations and design requirements of any other agency having jurisdiction, including but not limited to the NJDEP (e.g., Freshwater Wetland Rules, N.J.A.C. 7:7, Stormwater Management Rules, N.J.A.C. 7:8, Flood Hazard Area Rules, N.J.A.C. 7:13, NJPDES Rules, N.J.A.C. 7:14A), a Soil Conservation District acting pursuant to Soil Erosion & Sediment Control Act Rules (N.J.A.C. 2:90), or any county or other regional entity having authority pursuant to an adopted Regional Stormwater Plan.

C. Optional Additional Measures.

1. The use of green roofs is encouraged in the Lake Management Zone, to clean and slow the release of stormwater.

2. Clustering in accordance with the provisions of the Cluster Development Ordinance (§ 8.1) is also encouraged, where it results in a greater buffer between the lake and any new septic system or other land disturbance than would otherwise be feasible.

§ 6.6.4 Scenic Resources Tier
The Scenic Resources Tier includes lands surrounding Highlands lakes that lie within 300 feet of the shoreline (the Shoreland Protection Tier) plus lands within 1,000 feet of the shoreline that fall within the viewshed observable from the opposite shoreline. The provisions of this section, applicable to any development permitted in the Scenic Resources Tier, apply to both the Preservation Areas and the Planning Area. These requirements regarding the Scenic Resources Tier are applied in addition to all requirements applicable to the Shoreland Protection Tier and Water Quality Management Tier.

A. Scenic Resources Tier Mapping. For purposes of this section, applicants may establish and indicate in submission materials that all lands falling within 1,000 feet of the shoreline of a Highlands lake constitute the designated Scenic Resources Tier viewshed. In the alternative, the actual limits of the affected viewshed area must be delineated and mapped for submission by a licensed Land Surveyor, Professional Engineer, Landscape Architect, or other qualified professional. Such delineations shall be based upon the topography of the lands surrounding the Highlands lake, with the highest observable elevations from the opposing shoreline forming the viewshed perimeter. For purposes of this Ordinance, observable elevations shall be those projected by use of topographic maps, regardless of any intervening building, structure, tree or other natural vegetation, along sight lines drawn radially from relevant vantage points along the opposing shoreline; such vantage points being sufficient in number and location to yield the full extent of the potential view. The viewshed perimeter shall in no location be less than the 300-foot depth of the Shoreland Protection Tier.

B. Protection Standards. For all lakes with public access (i.e., with shorelines that are not entirely privately-held and managed through a lake association), and for privately-held and managed lakes to the extent not contrary to statutory law or previously approved lake community development plans, the applicant must demonstrate that the protection of visual and scenic resources in the Scenic Resource Tier is achieved through implementation of the following requirements:

1. The application must clearly illustrate and assess the extent to which the proposed development will be visible from the opposite shore of the lake. If the applicant demonstrates that the proposed development will be completely obscured from view by virtue of existing topographic features
(specifically excluding buildings, structures, trees or other vegetation) intervening between the opposite shoreline and the development site, the remaining provisions of this subsection shall not apply.

2. Buildings shall be screened from view by trees and other native plant material to the maximum extent practicable and compatible with the existing character of the lake community, to minimize the visual intrusion on views from the opposing shorelines.

3. The massing of structures shall be designed to minimize blockage of views and be oriented, to the maximum extent possible, such that the longest side of the structure(s) is perpendicular to the shoreline.

4. The exteriors of all new or redeveloped buildings shall be designed and constructed with materials that minimize visual intrusion on the lake community character.

5. The clearing of trees shall be limited to the minimum extent needed to develop the site.

6. Any exterior lighting shall utilize full cut-off fixtures with light directed away from the shoreline.

7. Any fencing shall be limited to six (6) feet in height and unless specifically intended for such purposes as screening of a dumpster area, shall utilize visually permeable designs and materials.

C. Highlands Scenic Resources. In the event that an Application for Development within the Scenic Resources Tier involves a lot or lots that either contain, or lie adjacent to a property that contains a Highlands Scenic Resource as illustrate in Exhibit 17 and listed in the Highlands Element of the Master Plan, the provisions of § 6.12 below, shall apply.

§ 6.7  WATER CONSERVATION & DEFICIT MITIGATION

§ 6.7.1 Findings
The water resources of the Highlands Area are critical to supporting the life of the community. Ground water supplies represent the primary source of potable water in the Highlands Region and provide base flow to the Region’s streams. The importance of ensuring the high quality and sustainable use of Highlands ground water supplies cannot be overstated. The availability of clean water for human use is critical to the life and economic vitality of the Highlands Area. The availability of water for ecological purposes is critical to sustaining the aquatic ecosystems of streams, ponds and lakes as well as the riparian flora and fauna that depend upon them. When water withdrawals exceed the rate of recharge, ground water supplies diminish, making access more difficult, reducing reliability, and ultimately leading to loss of the potable water source. Overuse of ground water reduces stream base flows, impairs ecological function and integrity, and threatens the long-term reliability of potable water supplies that the community depends upon. The provisions of this section are intended to protect ground water supplies from depletion resulting from unsustainable use. Where ground water supplies are already depleted, these provisions require measures to enhance and restore this vital resource.

§ 6.7.2 Applicability
The provisions of subsection § 6.7.3 below, shall apply to all development within the Highlands Area. The remaining provisions of this section shall apply to any development application proposing a new or increased use of potable or nonpotable water derived from: a) any ground water source in a Highlands Area HUC14 subwatershed, whether through a public community or non-community water supply system well, a non-
§ 6.7.3 Water Conservation Requirements

All development proposals shall incorporate as applicable, the following water conservation measures to promote sound resource use, reduce supply deficits, and reduce the need for additional utility infrastructure:

A. Meet all applicable building code requirements for the use of water conservation fixtures and appliances in new or rehabilitated structures;

B. Provide automatic controls based on rain sensors (or soil moisture) for all new and replacement lawn irrigation systems, as required by the electrical subcode at N.J.A.C. 5:23-3.16;

C. Design all non-potable irrigation water uses to ensure that only the necessary amounts of water are used to achieve optimum plant growth, to the maximum extent practicable;

D. Provide for internal recycling or beneficial reuse of reclaimed water in new commercial development projects, to the maximum extent practicable;

E. Rely on stormwater for irrigation purposes to the maximum extent practicable, including but not limited to methods recommended by the U.S. Green Building Council through its Leadership in Energy and Environmental Design (LEED) program;

F. Reduce water losses to the maximum extent practicable, in the rehabilitation of on-site water supply utility infrastructure, through such means as application of American Water Works Association/International Water Association water loss analysis methods (AWWA Manual M-36 or most recent version).

§ 6.7.4 Net Water Availability

Net Water Availability has been calculated by the Highlands Council for each HUC14 subwatershed located within or partially within the Highlands Area (Exhibit 18). Expressed in million gallons per day (MGD), the values assigned to each HUC14 subwatershed derive from subtracting consumptive and depletive surface and ground water uses for a baseline year, from total ground water availability. Where Net Water Availability figures are negative numbers, the subwatershed is identified as a Current Deficit Area, meaning existing uses exceed sustainable supplies. The map of Net Water Availability by HUC14 Subwatershed provided at Exhibit 18 is herewith adopted and incorporated as a component of this Ordinance.

§ 6.7.5 Conditional Water Availability

For subwatersheds designated as Current Deficit Areas, the Highlands Council has assigned a limited amount of Conditional Water Availability, the use of which is conditioned upon satisfying certain mitigation requirements. Jurisdiction over the use of Conditional Water Availability lies solely with the Highlands Council and shall apply in the case of Current Deficit Areas until such time as a Water Use and Conservation Management Plan for such subwatersheds has been adopted and put into effect.

§ 6.7.6 Water Use and Conservation Management Plan

Where a Highlands Council-approved Water Use and Conservation Management Plan has been established for a municipality, HUC14 subwatershed, or group of HUC14 subwatersheds, any development application
involving the use of water derived from such subwatershed(s) shall be regulated fully in accordance with the requirements of such Plan. Adherence to the provisions of an adopted Water Use and Conservation Management Plan shall constitute satisfactory compliance with all of the provisions of this section, including those pertaining to Net Water Availability and Conditional Water Availability.

§ 6.7.7 Absence of Water Use and Conservation Management Plan
In the absence of a Highlands Council-approved Water Use and Conservation Management Plan for a municipality, HUC14 subwatershed, or group of HUC14 subwatersheds, any development application involving the use of water derived from such subwatershed(s) shall be subject to requirements of this subsection.

A. **Net Water Availability.** The provisions of this subsection shall apply to any development application proposing the use of Net Water Availability. These requirements shall apply regardless of whether such water is supplied from an on-site well or through a water supply utility.

1. **Highlands Council Findings Required.** No application shall be deemed complete or considered for review by the applicable Board until or unless the New Jersey Highlands Council has determined that the proposed consumptive or depletive water use will not exceed the remaining Net Water Availability for the source HUC14 subwatershed(s). Such finding shall be provided by formal notification from the Executive Director of the Highlands Council, indicating by reference to specified application submittals (as required by the Highlands Council) that the Highlands Council has reviewed the specific development proposal at issue, and authorizes the increased use of potable or non-potable water therein specified.

2. **Findings Determinative.** Any application substantially revised from that reviewed by the Highlands Council pursuant to A.1, above, shall in no case be approved by the reviewing Board unless the proposed use of Net Water Availability remains equal to or less than that authorized by the Highlands Council through its formal findings. Nothing herein shall be construed to preclude the applicant from seeking a revised Highlands Council determination as to Net Water Availability, however.

B. **Conditional Water Availability.** The provisions of this subsection shall apply to any development application proposing the use of Conditional Water Availability. These requirements shall apply regardless of whether such water is supplied from an on-site well or through a water supply utility.

1. **Highlands Council Findings Required.** No application shall be deemed complete or considered for review by the applicable Board until or unless a finding has been issued by the New Jersey Highlands Council indicating that: a) the proposed consumptive or depletive water use will not exceed the remaining Conditional Water Availability for the source HUC14 subwatershed(s); b) that the applicant has correctly determined the associated mitigation requirement; c) that the proposed development plan will incorporate or otherwise provide for acceptable methods of deficit mitigation; and d) that the mitigation measures proposed by the applicant can be reasonably anticipated to meet the required level of mitigation. Such findings shall be provided by formal notification from the Executive Director of the Highlands Council, indicating by reference to specified application submittals (as required by the Highlands Council) that the Highlands Council has reviewed the relevant components of the development proposal and authorizes it to proceed to the municipal review authority.

2. **Findings Determinative.** Any application substantially revised from that reviewed by the Highlands Council pursuant to B.1, above, shall in no case be approved by the reviewing Board unless: a) the
proposed use of Conditional Water Availability remains equal to or less than that authorized by the Highlands Council through its formal findings; b) the proposed methods of deficit mitigation are consistent with those so approved; and c) the anticipated levels of mitigation are sufficient to meet the associated mitigation requirements. Nothing herein shall be construed to preclude the applicant from seeking a revised Highlands Council determination as to Conditional Water Availability, however.

3. **Deficit Mitigation Requirements.** Applicants proposing the use of Conditional Water Availability shall comply with the deficit mitigation requirements herein.

a) The mitigation requirement applicable to any development project derives from the Highlands Council *Scaled Mitigation Requirements* table, provided below (Table 1). The figures represent the applicable recharge requirement as a percentage of consumptive/depletive water use.

<table>
<thead>
<tr>
<th>Deficit (MGD)</th>
<th>Proposed Consumptive or Depletive Water Use (gpd)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;= 1,000</td>
</tr>
<tr>
<td>0.0001 – 0.050</td>
<td>125%</td>
</tr>
<tr>
<td>0.051 – 0.100</td>
<td>125%</td>
</tr>
<tr>
<td>0.101 – 0.250</td>
<td>125%</td>
</tr>
<tr>
<td>0.251 – 0.500</td>
<td>125%</td>
</tr>
<tr>
<td>0.501 – 1.000</td>
<td>125%</td>
</tr>
<tr>
<td>1.000 – 7.100</td>
<td>150%</td>
</tr>
</tbody>
</table>

b) Deficit mitigation must be provided within the same HUC14 subwatershed as from which the source Conditional Water Availability derives. If the project and water source are not located in the same subwatershed, however, only mitigation measures that benefit the source HUC14 subwatershed may be utilized to mitigate the deficit.

c) The approval of any application proposing off-site deficit mitigation measures, whether through enhanced recharge or offsets from water conservation, shall be subject to the receipt of approvals from the Highlands Council and any other entities having jurisdiction over the activities proposed at the off-site location (whether located within or outside of the municipality).

d) On-site deficit mitigation measures, whether from enhanced recharge or offsets from water conservation shall be subject to the following criteria:

(i) Water Conservation Measures. Water Conservation Measures may be credited toward mitigation requirements only with respect to existing land uses with consumptive or depletive water uses. (Such measures must be incorporated into the design of any new improvements, in accordance with § 6.7.3, above.) Approval of any application proposing such measures shall be conditioned upon implementation of the measures prior to receipt of any Certificate of Occupancy or Approval for the project improvements. If conservation measures include such methods as reduced irrigation of landscaping, protective covenants (e.g., homeowner’s association by-laws) or other such legal mechanisms must be established to ensure their enforceability.
(ii) Recharge Measures. The applicant shall include the proposed mitigation measures in the project stormwater management plan, stormwater operation and maintenance manual, and applicable components of site design. The stormwater management plan and O&M manual shall achieve permanent maintenance and routine monitoring of the mitigation measure(s) so that the required rate of recharge is continuously achieved.

c) Any application for which deficit mitigation requirements cannot be achieved, shall not be approved by the reviewing Board. The applicant may modify any such proposal, however, to reduce the consumptive or depletive water uses to a level at which achieving deficit mitigation requirements is feasible. All applicants shall demonstrate compliance with these standards through submission of a Deficit Mitigation Plan, as provided below.

4. Deficit Mitigation Plans. All applicants proposing deficit mitigation shall prepare and submit Deficit Mitigation Plans for approval which shall include the following elements:

a) Detailed justification for the proposed Conditional Water Availability use and documentation that the amount of consumptive or depletive use is minimized (including the conservation measures outlined in subsection § 6.7.3 above).

b) Engineering plans and drawings of mitigation facilities proposed to provide the necessary mitigation in the source HUC14 subwatershed.

c) Sufficient information to demonstrate that the mitigation measures are individually feasible and in the aggregate will meet or exceed the mitigation requirement.

d) Sufficient information to substantiate that the facility will recharge the ground water table such that it reasonably can be expected (e.g., using general ground water flow models) to support aquifer recharge, or to support stream flow with a travel time in excess of one month.

e) Proposed implementation schedule demonstrating compliance with the following timeframe targets:

   (i) Satisfaction of mitigation requirements within one (1) year of approval if the consumptive or depletive water use is less than 20,000 gpd in the Planning Area or 10,000 gpd in the Preservation Area, on average.

   (ii) Satisfaction of mitigation requirements within a longer time period for larger amounts, up to five (5) years from approval, but no later than upon initiation of the consumptive or depletive water use, except for projects that involve a combination of high current water deficits and large proposed consumptive and depletive water uses as shown in the shaded areas of the table Scaled Mitigation Requirements (Table 1., above), in which case, on-site mitigation shall be successfully completed prior to initiation of the water use but may be implemented concurrent with on-site construction. Off-site mitigation shall be successfully completed prior to any on-site construction.

   (iii) Mitigation requirements may be phased in keeping with the level of consumptive and depletive water use that actually occurs based on phased construction of a project.
f) Proposed operation, maintenance and monitoring requirements to ensure that sufficient recharge is maintained over time. These requirements shall at a minimum be sufficient to comply with N.J.A.C. 7:8 stormwater maintenance requirements.

5. **Conditions of Approval.** As a condition of any approval of a development application, inclusive of the proposed Deficit Mitigation Plan, pursuant to this subsection, the applicant shall:

   a) Demonstrate that the entity designated to implement the Deficit Mitigation Plan is qualified and capable of carrying out the plan, regardless of the timeframe involved.

   b) Provide proof of acceptance of all responsibilities for implementation of the Deficit Mitigation Plan by the responsible entity.

   c) Provide a cost estimate for implementation of the Deficit Mitigation Plan, inclusive of a 10% contingency.

   d) Provide an escrow fund or performance/maintenance bond (at the discretion of the municipality or the entity responsible for the mitigation) equal to the Deficit Mitigation Plan cost estimate, to be available to the municipality and secondarily, to the Highlands Council for implementation of the necessary deficit mitigation measures should the applicant fail to properly implement the measures according to the Deficit Mitigation Plan schedule. This guaranty shall be established in accordance with all applicable laws and regulations, and shall remain in effect until two years after implementation of all mitigation measures. However, if the implementing entity is a public agency, the commitment must be in the form of a binding resolution or ordinance of the governing body, and the cost of implementation must be bonded to ensure sufficient resources.

   e) Ensure that the responsible entity shall report annually to the Highlands Council and the municipality regarding implementation of the Deficit Mitigation Plan through the life of the guaranty, unless reporting is achieved through effectuation of a Water Use and Conservation Management Plan.

   f) Establish an ongoing system of such reporting which must operate until the relevant subwatershed is no longer in deficit, or until the reporting responsibility is absorbed into implementation of an approved Water Use and Conservation Management Plan.

§ 6.8 **Prime Ground Water Recharge Areas**

§ 6.8.1 **Findings**
Prime Ground Water Recharge Areas are those lands within a HUC14 subwatershed that most efficiently provide, in the aggregate, 40 percent of total drought recharge volume for the HUC14 subwatershed. Protection of such areas is vital to maintaining the quality and quantity of the ground water resources upon which both human and non-human communities in the Highlands Area heavily rely. It is the intent of the provisions herein to ensure that Prime Ground Water Recharge Areas of the Highlands Area receive the highest possible protection from intrusion to protect both the recharge capacity that they provide and the quality of the ground water supplies that they replenish.
§ 6.8.2 Applicability
The provisions of this section shall apply to any development application involving the Prime Ground Water Recharge Area (Exhibit 12), whether in the Preservation Area or the Planning Area.

§ 6.8.3 Standards
Disturbance of Prime Ground Water Recharge Area (PGWRA) by any regulated development shall be permitted only upon a finding by the reviewing board or other applicable municipal authority that the proposal complies with the provisions of this subsection.

A. Avoidance. The proposed disturbance cannot be avoided. Development shall not occur in Prime Ground Water Recharge Areas unless either, the entirety of the subject property is located within a Prime Ground Water Recharge Area and thus cannot be avoided, or the disturbance represents the only viable alternate means to avoid Critical Habitat, Highlands Open Waters buffers, Moderately Constrained Steep Slopes, or Severely Constrained Steep Slopes, to the extent that these resources are also present upon the subject property.

B. Minimization. The proposed disturbance cannot be minimized. Where total avoidance is not feasible, total recharge area disruption (i.e., alteration of natural recharge patterns or volumes) shall not exceed 15% of the Prime Ground Water Recharge Area located within the affected parcels, placed where feasible on those parts of the PGWRA having the lowest relative recharge rates and the least potential for aquifer recharge based upon site analysis.

C. Low Impact Development. The proposal incorporates Low Impact Development practices. Low Impact Development practices (see § 7.1) shall be used in the design of the development proposal to reduce total recharge disruption to the minimum feasible, within the 15% cap.

D. Mitigation. The proposal includes a PGRWA Mitigation Plan. Any development application involving disturbance of a Prime Ground Water Recharge Area shall be accompanied by a mitigation plan, providing for an equivalent of 125% of pre-construction recharge volumes for that portion of the Prime Ground Water Recharge Area that will be disturbed. The recharge mitigation shall occur within the following areas, in order of priority: (1) the same development site to the maximum extent feasible; (2) the same HUC14 subwatershed; or (3) where no feasible option exists in the same HUC14 subwatershed, an interrelated HUC14 subwatershed approved by the Highlands Council. This requirement shall apply to all portions of the Prime Ground Water Recharge Area where recharge is disrupted through impervious surfaces, re-routing of stormwater runoff and recharge from natural flow paths, and other similar changes.

§ 6.8.4 Potential Contaminant Sources
Where pursuant to § 5.2.2 above, a Major or Minor Potential Contaminant Source (PCS) (as listed at APPENDIX B or APPENDIX C) constitutes a conditionally permitted use within a Prime Ground Water Recharge Area, the standards of subsection § 6.9.3.B, and to the extent applicable, § 6.9.3.A below, shall apply in addition to the preceding requirements.

§ 6.9 WELLHEAD PROTECTION

§ 6.9.1 Findings
Protection of ground water resources that directly provide water to potable water supply wells is vital to the public health, safety and welfare of the community. It is also of primary importance to ensure continued availability of clean drinking water to all that rely upon it. Through regulation of land use, physical facilities
and other activities within Wellhead Protection Areas (WHAPAs), the potential for ground water contamination can be reduced by preventing the introduction and migration of pollutants into ground water sources that supply water supply wells.

§ 6.9.2 Applicability
The provisions of this section shall apply to all proposed development activities in designated Wellhead Protection Areas (Exhibit 13) in the Highlands Area, whether in the Preservation Area or the Planning Area.

§ 6.9.3 Potential Contaminant Sources
Where pursuant to § 5.2.2 above, a Major or Minor Potential Contaminant Source (PCS) (as listed at APPENDIX B or APPENDIX C) constitutes a conditionally permitted use within a Wellhead Protection Area, the standards of this subsection shall apply. These conditions shall not be construed to waive or obviate any rules, regulations, or other requirements pertinent to such uses that may derive from outside agencies having jurisdiction, such as the NJDEP.

A. Best Management Practices. All Potential Contaminant Sources shall be designed in a manner that prevents the unintentional discharge of toxic or hazardous pollutants to ground water, surface water bodies, or the land surface from internal areas, loading and storage areas, transfer areas, etc. Best management practices include but are not limited to: primary and secondary containment; and prevention of contact between pollutants and precipitation, stormwater and flood waters. NJDEP approval of a NJPDES permit under N.J.A.C. 7:14A for a proposed discharge, a Discharge Prevention, Containment and Countermeasure (DPCC) Plan under N.J.A.C. 7:1E, construction of an underground storage tank under the requirements of N.J.A.C. 7:14B, or approval by the SCD of a Farm Conservation Plan or Resource System Management Plan pursuant to N.J.A.C. 2:92, (see § 6.10.4 below and APPENDIX D), shall be deemed equivalent to the best management practices of this Ordinance.

B. Operations and Contingency Plans. As a condition of approval of any Application for Development of a Potential Contaminant Source within a WHPA, the applicant shall submit an Operations and Contingency Plan to and receive approval from the Board of Health pursuant to the Highlands Board of Health Ordinance [insert reference here, i.e., ordinance title, number, effective date]. No approval or certificate of occupancy (as appropriate) for the development shall be issued until or unless the Board of Health verifies that the Operations and Contingency Plan has been approved and is on file with the appropriate entities.

§ 6.10 AGRICULTURAL RESOURCES

§ 6.10.1 Findings
The Highlands Area contains fertile soils, receives plentiful rainfall, and is characterized by a moderate climate favorable to agricultural and horticultural production. The agricultural industry is vital to the state, the region and the community not only for local provision of agricultural products, but for the economic benefits associated with agricultural production and for maintenance of the rural character associated with agricultural lands. It is the intent of this section to promote Sustainable Agriculture (as defined at § 3.2) in the Highlands Area by ensuring the long-term sustainability of agricultural resources and the viability of the agricultural industry. These provisions are intended to ensure a healthy agricultural environment and a sufficient agricultural land base, by protecting farmland and farm soils, promoting farmland preservation, and providing the allowances necessary to permit and support farming and farm operations.
§ 6.10.2 Applicability
The provisions of this section apply to agricultural and horticultural uses in the Highlands Area and to the lands of the Agricultural Resource Area (Exhibit 15), specifically. The Agricultural Resource Area (ARA) consists of the areas of most concentrated and contiguous agricultural uses in the Highlands Area and contains major areas of Important Farmland Soils. These provisions shall apply to both the Preservation Area and the Planning Area.

§ 6.10.3 Agricultural Resource Area

A. Agricultural and Horticultural Development. In accordance with the provisions of § 5.2.1 above, permitted uses in the ARA must include agricultural and horticultural uses (as defined at § 3.2). Accessory uses permitted in conjunction with such uses include ancillary, incidental or otherwise related supporting uses and the accessory structures devoted to such uses. The specific permitted uses and other applicable requirements pertaining to agricultural and horticultural development in the ARA include the following:

1. Permitted Uses & Accessory Uses. [To be established by the municipality in consideration of the characteristics of the local ARA and in consideration of the requirements of the Right to Farm Act.]

2. Bulk & Other Requirements. [For example: minimum lot size, types of permitted structures (e.g., barns, silos, farmhouses, residential accessory structures, sheds, roadside stands), setbacks, lot coverage, parking, buffers, screening, lighting, signs, access roads and driveways.]

3. Other Regulations. Approval of any application proposing agricultural or horticultural development pursuant to this subsection shall in addition, be subject to the provisions of § 6.10.4 through § 6.10.6 below. [Additional requirements may be added at the discretion of the municipality.]

B. Residential Development. Pursuant to § 5.2.1 above, where the underlying zoning permits residential development within any portion of the ARA, the only form of such development permitted is residential cluster development in accordance with the provisions of § 8.1 below, provided the minimum thresholds (see § 8.1.6) can be satisfied. Where such thresholds cannot be met, the allowances for residential development provided in the underlying Zoning Ordinance apply to applications for such development, subject to all density and resource protection requirements of this Ordinance. Lawfully existing residential development in the ARA that does not meet the cluster development requirements of § 8.1 is permitted to continue; it remains under the regulations of the underlying Zoning Ordinance, and is not made nonconforming by the provisions of § 5.2.1.

C. Other Development. Where the underlying Zoning Ordinance provides for other permitted uses within the ARA, such uses shall remain as permitted uses, unless eliminated or reverted to a conditional or prohibited use by the other provisions of § 5.2.

§ 6.10.4 Conditions of Approval
The approval of any application for agricultural or horticultural development in the Highlands Area is subject to specific requirements concerning the development and implementation of farm conservation plans, as provided in this subsection.

A. Preservation Area. The approval of any proposal for agricultural or horticultural development in the Preservation Area is subject to specific requirements of the Highlands Act, as provided at APPENDIX E, enforceable by the NJDA or the local Soil Conservation District in accordance with the NJDA Agricultural Development in the Highlands Rules (N.J.A.C. 2:92, APPENDIX D).
B. **Planning Area.** The approval of any proposal for agricultural or horticultural development in the Planning Area is subject to the specific requirements listed at B.1 through B.3, below, which are enforceable by the Highlands Council. As a condition of any local approval, the owner or operator of the Farm Management Unit or his/her agent shall be required to obtain a release from the Highlands Council indicating that these requirements have been or will, by formal agreement or other appropriate means, be satisfactorily addressed. This condition shall be satisfied only by submission of a copy of formal notice of such release issued by the Executive Director of the Highlands Council. No permit(s) shall be issued and no land disturbance in connection with the approval shall be permitted until or unless this condition has been satisfied.

1. **Farm Conservation Plan.** The development and implementation of a Farm Conservation Plan (prepared by the USDA NRCS, TSP, appropriate agent, or NJDA staff, and approved by the local SCD) is required as a condition of approval for any agricultural or horticultural development that would result in the increase, since the date of enactment of the Highlands Act (August 10, 2004), either individually or cumulatively, of new agricultural impervious cover of greater than three percent (3%) but less than nine percent (9%) to the total land area of a Farm Management Unit (as defined at § 3.2 above).

2. **Resource Management System Plan.** The development and implementation of a Resource Management System Plan (prepared by the USDA NRCS, TSP, appropriate agent, or NJDA staff, and approved by the local SCD) is required as a condition of approval for any agricultural or horticultural development that would result in the increase, since the date of enactment of the Highlands Act (August 10, 2004), either individually or cumulatively, of new agricultural impervious cover by nine percent (9%) or greater to the total land area of a Farm Management Unit (as defined at § 3.2 above).

3. **Plan Requirements.** Any Farm Conservation Plan required pursuant to this section shall be prepared in conformance with Sections III and IV of the June 1, 2005 NRCS New Jersey Field Office Technical Guide (available electronically at http://www.nrcs.usda.gov/technical/efotg/), as may be amended and supplemented by the NRCS, and shall include all items required under N.J.A.C. 2:92-3.1, for same (see applicable provisions at APPENDIX F). Any Resource Management Systems Plan required pursuant to this section shall be prepared in conformance with all Sections of the same Guide, inclusive of all items required under N.J.A.C. 2:92-4.1, as also provided in APPENDIX F.

§ 6.10.5 **Right to Farm**
Nothing in these provisions or in the whole of this Ordinance shall be construed to alter or compromise the goals, purposes, policies and provisions of, or lessen the protections afforded to farmers by, the Right to Farm Act, P.L.1983, c.31 (C.4:1C-1 et seq.), and any rules or regulations adopted pursuant thereto.

§ 6.10.6 **Approvals Subject to Outside Jurisdiction**
The provisions of this section shall not be construed to alter or obviate the requirements of any other applicable state or county laws, rules, or regulations, including specifically N.J.A.C. 2:92, Agricultural Development in the Highlands, as promulgated by the New Jersey Department of Agriculture, or those of the SADC, the CADB, the Soil Conservation Districts, or the NJDEP.
§ 6.11 **HISTORIC, CULTURAL & ARCHAEOLOGICAL RESOURCES**

§ 6.11.1 **Findings**
The historic, cultural and archaeological resources of the Highlands Area form an essential component of its character and aesthetic quality. They preserve a part of the history of the Borough/Township/Town Highlands Area and provide a link to its past. They are representative of significant people, places and events in history and provide vital information about what life was like in the community in earlier times. Preservation of these resources is in the interest of the citizens of the Borough/Township/Town, the surrounding region, the State of New Jersey, and in many instances, the nation as a whole. These resources provide a rich source of information from which to learn about the growth and development of our communities, our culture, our science and technology, and our way of life. They provide an educational opportunity, contribute to the community’s sense of place, and add context to our everyday lives. It is the intent of this section to provide for the protection and preservation of the historic, cultural and archaeological resources of the Highlands Area.

§ 6.11.2 **Applicability**
The provisions of this section shall apply to any development application involving property which is located either, among those identified as containing Highlands Historic, Cultural and Archaeological Resources at Exhibit 16 (and listed as such in the Highlands Element of the Master Plan), or which lies adjacent to any property containing or partially containing such Resources. These provisions shall apply to both the Preservation Area and the Planning Area, with the exception only of any application for Major Highlands Development requiring issuance of an HPAA from the NJDEP.

§ 6.11.3 **Referral to Highlands Council Required**
Any development application involving a lot or lots covered by § 6.11.2 above, shall be neither deemed complete nor reviewed or considered by the municipal authority until or unless the proposal has been approved by the New Jersey Highlands Council. Such authorization shall be in the form of a formal notification from the Executive Director of the Highlands Council, indicating by reference to specified plan drawings (including date, title, plan sheet number(s), and plan preparer) that the application has been approved by the Highlands Council and may proceed to the municipal review authority.

§ 6.11.4 **Exceptions**
At such time as the municipality has, pursuant to all applicable provisions of the MLUL (N.J.S.A. 40:55D-1 et seq.) established an Historic Preservation Commission, adopted an Historic Preservation Ordinance, listed a Resource included among the Highlands Historic, Cultural and Archaeological Resources (Exhibit 16) in the Historic Preservation Element of the Master Plan, and by ordinance designated such Resource as an historic site or district in accordance with duly-established criteria, referral to the Highlands Council of a development application involving the lot or lots on which such Resource is located need not occur until after completion of all facets of the local review have taken place, and such referral shall instead be a condition of any approval of the application.

§ 6.12 **SCENIC RESOURCES**

§ 6.12.1 **Findings**
The scenic resources of the Borough/Township/Town Highlands Area are part of the unique landscape that defines the Highlands Region. These resources are essential to the character and aesthetic quality of the Highlands Area and of the wider Region. Protecting these resources and maintaining the visual integrity and scenic beauty of noteworthy viewsheds and natural and cultural features of significance in the Highlands Region adds social, economic, and environmental benefits to the community. It is the intent of these

**DRAFT FOR MUNICIPAL REVIEW**

-84-
provisions to ensure the protection of Highlands Area Scenic Resources, both from disturbances that may alter or damage such resources directly, or by intrusion(s) into scenic viewsheds that provide visual access to them, and of which they are a part.

§ 6.12.2 Applicability
The provisions of this section shall apply to any development application involving property which is located either, among those identified as containing a Highlands Scenic Resource pursuant to Exhibit 17 (and listed as such in the Highlands Element of the Master Plan), or which lies adjacent to any property containing or partially containing such Resources. These provisions shall apply to both the Preservation Area and the Planning Area.

§ 6.12.3 Referral to Highlands Council Required
Any development application involving a lot or lots covered by § 6.12.2 above, shall be neither deemed complete nor reviewed or considered by the municipal authority until or unless the proposal has been approved by the New Jersey Highlands Council. Such authorization shall be in the form of a formal notification from the Executive Director of the Highlands Council, indicating by reference to specified plan drawings (including date, title, plan sheet number(s), and plan preparer) that the application has been approved by the Highlands Council and may proceed to the municipal review authority.

§ 6.12.4 Exceptions
At such time as the municipality has, pursuant to all applicable provisions of the MLUL (N.J.S.A. 40:55D-1 et seq.) established an Historic/Scenic Resources Preservation Commission authorized to survey, advise and make recommendations concerning scenic resources, adopted an Historic/Scenic Resources Preservation Ordinance, listed a Resource included among the Highlands Scenic Resources (Exhibit 17) in the Historic/Scenic Preservation Element of the Master Plan, and by ordinance designated such Resource as a historic/scene site or district in accordance with duly-established criteria, referral to the Highlands Council of a development application involving the lot or lots on which such Resource is located need not occur until after completion of all facets of the local review have taken place, and such referral shall instead be a condition of any approval of the application.
ARTICLE 7.  HIGHLANDS AREA GENERAL REGULATIONS

§ 7.1  LOW IMPACT DEVELOPMENT

§ 7.1.1 Applicability
The following provisions shall apply to all development applications involving property in the Highlands Area, whether in the Preservation Area or the Planning Area.

§ 7.1.2 Standards
A. Applicants shall demonstrate that the project design process incorporates conservation design planning, including the following steps:

1. Preparation of an existing features and site analysis plan, including identification of Highlands Area resources and Resource Areas;
2. Evaluation of site context through identification of the physical and community character of the surrounding area;
3. Selection of open space conservation areas, where applicable, that maximize the retention of resource values, provide connections to existing trails, open spaces or greenways, and incorporate natural features and characteristics as site amenities;
4. Establishment of development yield (e.g., residential, retail, office) and apportionment of septic system yield, net water availability, and water supply and sewer utility availability, as applicable, and in keeping with all density and intensity requirements of § 5.3, above;
5. Lay out of building lots, if applicable, and incorporation of low impact development design techniques for site design, stormwater management and resource protection; and

B. Development applications must achieve stormwater management in compliance with § 7.2, below, including the municipal stormwater management ordinance established in compliance with the municipal stormwater NJPDES permit under N.J.A.C. 7:14A and 7:8, and all applicable NJDEP standards and requirements.

C. Relief from the strict application of the provisions of the Zoning Ordinance applicable to site design shall be considered where necessary to provide for incorporation of smart growth principles and low impact development techniques such as use of shared parking and driveway areas, biofiltration swales, rainwater capture and reuse, and reduced road or driveway widths. Where such deviations will minimize or eliminate adverse impacts to Highlands natural resources, these benefits shall be given significant weight in the analysis of approval criteria.

D. The site preparation plan shall limit clearing, grading and soil compaction to the minimum required to construct the project in accordance with the approved plans, inclusive of area for construction equipment maneuvering, while ensuring protection of mature trees and habitat outside of the site development area.

DRAFT FOR MUNICIPAL REVIEW

-86-
E. Landscaping shall use native, drought-tolerant (other than where used in rain gardens, biofiltration swales and other stormwater management facilities), disease-resistant plants, allowing for natural landscaping wherever feasible, and shall under no circumstances include invasive species.

F. Building orientation and design shall be designed to take advantage of micro-climate conditions, to the maximum extent feasible, to maximize solar gain for winter heating, and to minimize solar gain during high temperature summer conditions except where desirable for the construction of solar energy systems. Other energy-efficient features shall be considered and incorporated into site layouts and buildings, as appropriate.

G. The applicant shall ensure reuse and recycling of building materials, to the extent possible, when development involves demolition.

H. All low impact development features shall be maintained through a monitoring and maintenance plan, with procedures for replacing such features as necessary.

§ 7.2 STORMWATER MANAGEMENT

§ 7.2.1 Applicability
The provisions of this section shall apply to any development application involving property in the Preservation Area or the Planning Area, with the exception of any application requiring NJDEP issuance of an HPAA for Major Highlands Development in the Preservation Area.

§ 7.2.2 Standards

A. Carbonate Rock Areas. Stormwater management plans shall be provided in connection with any application proposing development within a Carbonate Rock Area. Such plans shall be in full compliance with the provisions of § 6.5 above, and shall be approved only upon demonstration that potential hazards to public health and safety, structures and ground water quality due to concentrated surface water flows that dissolve carbonate rock, have been eliminated or otherwise addressed to the satisfaction of the reviewing engineer (or qualified professional). Development plans must indicate the means and methods by which such discharge shall be mitigated, with the maximum emphasis on use of nonstructural measures and avoidance of modifications to the karst features.

B. Beneficial Stormwater Reuse. Development applications involving water demands for recreational uses, non-agricultural irrigation, and other non-potable uses shall demonstrate maximum practical stormwater reuse to minimize both the volume of stormwater discharges and the water demand sought for such purposes.

C. Regional Stormwater Plans. The stormwater management aspects of any development plan shall comply with all applicable components of any regional stormwater management plans adopted by NJDEP pursuant to N.J.A.C. 7:8 and N.J.A.C. 7:15.

D. Total Maximum Daily Loads (TMDLs). Applications shall be designed in compliance with any TMDL adopted by NJDEP (pursuant to N.J.A.C. 7:15) that has also been adopted by the municipality in compliance with the municipal stormwater management ordinance as established pursuant to the municipal stormwater NJPDES permit under N.J.A.C. 7:14A and 7:8.
E. **Prime Ground Water Recharge Areas.** Where disturbance of Prime Ground Water Recharge Area (PGWRA) is permitted under f) above, the applicant shall demonstrate compliance with all provisions therein.

F. **Water Quality.** To the maximum extent feasible, the plan shall ensure recharge of clean stormwater rather than contaminated stormwater. Where runoff from contaminated areas is unavoidable, the applicant shall incorporate Low Impact Development (see H., below) and other Best Management Practices standards to minimize the discharge of stormwater-entrained pollutants to ground and surface waters.

G. **Wellhead Protection Areas (WHPA).** Any stormwater management structure located within a WHPA shall be permitted only in compliance with the provisions of § 5.2, above, and § 6.9, below.

H. **Low Impact Development (LID).** To the maximum extent feasible, LID techniques shall be incorporated into the design of all development proposals, to preserve, mimic and enhance the natural hydrologic cycle, drainage patterns and natural land cover existing on the site, including but not limited to:

1. Implementation of on-site stormwater management features that maintain, restore and enhance the pre-existing natural drainage patterns of the site;

2. Achievement of an on-site stormwater capture performance standard of 80% for average annual precipitation, using low impact development design techniques preferentially, and structural stormwater measures only to the extent necessary;

3. Limitations on the amount of impervious cover on a site as a means to protect and increase stormwater infiltration and reduce stormwater runoff;

4. Use of a “design with nature” approach where natural features are used or enhanced to achieve management of runoff volume, rate and quality of stormwater;

5. Use of grass channels, dry swales, wet swales, infiltration basins, bio-swales and water gardens, green roofs, and other low impact approaches to attenuate and control stormwater and provide multiple environmental benefits; and

6. Minimization of: a) disturbances to natural vegetation and topography; b) exposure of stormwater runoff to pollutant-generating land uses; and c) alterations in the hydrologic response to precipitation through natural patterns.

§ 7.3 **SPECIAL ENVIRONMENTAL ZONE**

§ 7.3.1 Findings
Lands within the Highlands Special Environmental Zone are those having the highest priority ranking for preservation based on the Highlands Council Resource Assessment. This assessment considers five indicators for the protection of water resources and environmentally sensitive lands, including: Forest within the Forest Resource Area, Riparian Corridor Condition High, Highlands Open Water Protection Area, Critical Habitat, and the Water Quality Management Tier of Lake Management Areas (excluding those of the Lake Community Sub-Zone). Preservation of these lands is vital to: a) protecting Highlands Area water resources and environmentally sensitive lands; b) protecting water supply reservoirs and other critical water features; c)
creating large contiguous areas of environmentally sensitive lands; d) creating habitat corridors; and e) connecting existing preserved open space.

§ 7.3.2 Applicability
The provisions of this section shall apply to any development application involving property which is located within the Special Environmental Zone (Exhibit 14). These provisions apply solely to the Preservation Area, in which the Special Environmental Zone is fully located.

§ 7.3.3 Referral to Highlands Council Required
Any development application involving a lot or lots located, or partially located, within the Special Environmental Zone, shall be neither deemed complete nor reviewed or considered by the municipal authority until or unless the proposal has been authorized by issuance of either, an HPAA with waiver from the NJDEP or a Special Environmental Zone waiver from the New Jersey Highlands Council. Highlands Council authorization shall be in the form of a formal notification from the Executive Director of the Highlands Council, indicating by reference to specified plan drawings (including date, title, plan sheet number(s), and plan preparer) that the application has received a waiver from the Highlands Council and may proceed to the municipal review authority.

§ 7.4 SEPTIC SYSTEM DESIGN AND MAINTENANCE
The requirements herein apply to proposed development activities reliant upon installation of individual subsurface septic disposal systems, regarding the proper operation, design, development, monitoring, placement and maintenance of septic systems.

A. The design of septic systems shall be in compliance with the Standards for Individual Subsurface Sewage Disposal Systems at N.J.A.C. 7:9A and the Board of Health Highlands Ordinance and shall be subject to approval of the Board of Health.

B. All subdivision and site plan applications shall demonstrate that the proposed lot(s) or site plan incorporates the applicable requirements of N.J.A.C. 7:9A with respect to soils suitability, location, size, and separation distances.

C. All subdivision and site plan applications shall incorporate reserve septic system disposal areas for each septic system, which are sufficient with respect to soils suitability, location and size to meet the requirements of N.J.A.C. 7:9A, to ensure the long-term viability of septic systems in new development.

D. All reserve septic system disposal areas shall be protected by deed restrictions prohibiting the construction or installation of permanent improvements and preserving the area (and its soils) for future installation of a replacement disposal field.

E. All new individual septic disposal systems shall be subject to the applicable septic system management and maintenance requirements of the Board of Health, including those established in the Highlands Board of Health Ordinance and in compliance with the standards for septic system maintenance in the Water Quality Management Planning Rules, N.J.A.C. 7:15.

F. The application shall demonstrate compliance with the Highlands Board of Health Ordinance and any other Board of Health ordinances to achieve the maintenance of existing and new septic systems.

G. New development proposing to use septic systems shall be designed in a manner that ensures that untreated well water meets state drinking water quality standards for non-natural contaminants and
minimizes the risk of well contamination due to the flow of septic systems plumes within or between developed lots, addressing general background water quality and flow patterns, major fracture systems and other appropriate geological, geophysical and hydrogeological issues.

§ 7.5 PUBLIC WATER SYSTEMS
The creation or expansion of any public water system, as permitted in the Existing Community Zone of the Planning Area (pursuant to § 5.3.7, above) shall comply with the following requirements:

A. **Estimation of Need.** Development water supply demands shall be calculated based on maximum summer month demand and on annual average demand using demand factors in N.J.A.C. 7:10 “Safe Drinking Water Regulations.”

B. **Water Resource Transfers.** Applicants shall demonstrate that under the proposed action either:
   1. No new or increased water transfer between subwatersheds will occur; or
   2. No other option exists to meet public health, safety and welfare objectives, and where such transfers do occur, they are in full compliance with the requirements of § 6.7 above (Water Use and Deficit Mitigation), including limitations on demands on the source subwatershed.

§ 7.6 WASTEWATER COLLECTION AND TREATMENT SYSTEMS
The creation or expansion of any wastewater collection and treatment system, as permitted in the Existing Community Zone of the Planning Area (pursuant to § 5.3.7, above), shall comply with the following requirements:

A. **WQMP Consistency.** The proposed system shall be consistent with the relevant Areawide Water Quality Management Plan adopted by NJDEP pursuant to N.J.A.C. 7:15.

B. **Prohibitions.** Expansion of sewer service areas shall not be permitted for existing wastewater collection and treatment systems that are non-compliant with NJPDES permit requirements for effluent quality.

C. **Estimation of Need.** Development wastewater demands shall be calculated based on maximum three month demand and on annual average demand using demand factors in N.J.A.C. 7:14A or N.J.A.C. 7:9A as appropriate.

D. **Water Resource Transfers.** Applicants shall demonstrate that under the proposed action either:
   1. No new or increased water transfer between subwatersheds will occur; or
   2. No other option exists to meet public health, safety and welfare objectives, and where such transfers do occur, they are in full compliance with the requirements of § 6.7 above (Water Use and Deficit Mitigation), including limitations on demands on the source subwatershed.

DRAFT FOR MUNICIPAL REVIEW
ARTICLE 8. PLANNED DEVELOPMENT REGULATIONS

§ 8.1 RESIDENTIAL CLUSTER DEVELOPMENT [If Applicable]

§ 8.1.1 Findings
The intent of this article is to provide for cluster and conservation design development (hereinafter referred to as cluster development) consistent with the Land Use Plan Element of the Master Plan and as defined at § 3.2. Cluster development is a development design technique under which principal buildings and structures are grouped together on a portion of the Cluster Project Area, while the remaining land area is permanently deed-restricted in agricultural use, for conservation of natural resources, or as open space for environmental protection including public recreational use. Cluster development allows flexibility in the design and lay-out of development projects, providing opportunity for new construction while addressing other priorities, such as: protecting environmentally sensitive areas, preserving large contiguous areas of open space and agricultural land, supporting the continuation of existing agricultural and/or horticultural land uses, and developing attractive residential development consistent with community character.

§ 8.1.2 Applicability
The provisions of this section shall apply to all lands in the ARA, including that in both the Preservation Area and the Planning Area, as provided at § 4.3.11 and as designated in the map titled “Agricultural Resource Area” (Exhibit 15). The permitted principal residential use for any underlying municipal Zoning District in the ARA which permits residential development as a principal use, is restricted solely to cluster development in accordance with § 5.2.1.B, which incorporates all provisions of this section. Approval of all residential cluster development within the ARA shall be conditioned upon approval by the Highlands Council in accordance with the Highlands Council Cluster/Conservation Design Development Guidelines. Cluster development within the ARA shall be consistent with the Agriculture Retention/Farmland Preservation Plan Element of the Master Plan and the provisions of this ordinance by supporting the preservation of farmland, avoiding conflicts with agriculture, maintaining and enhancing the sustainability and continued viability of the agricultural industry, protecting Important Farmland Soils, and meeting the management and protection provisions of this ordinance for Highlands Area Resources. [Note: Until the municipality develops a cluster development ordinance approved by the Highlands Council or updates an existing cluster development ordinance during the Full Plan Conformance process, all residential cluster development in the ARA shall be conditioned upon approval by the Highlands Council.]

§ 8.1.3 Cluster Project Area Standards
The Cluster Project Area (as defined at § 3.2) includes all of the individual parcels from which development is clustered, including the area set aside for preservation and the area set aside for development. A Major Highlands Development in the Preservation Area that proposes or is required to use cluster development shall comply with A. Residential cluster development shall be implemented in accordance with the Highlands Council Cluster/Conservation Design Development Guidelines, incorporated by reference herein, and shall incorporate the provisions below for the Cluster Project Area. The use of clustering in Highlands Zones or Sub-Zones having a high concentration of environmentally sensitive resources will be limited. The use of non-contiguous clustering, wherein the development rights of non-contiguous parcels are aggregated for use upon a single parcel (or group of adjacent parcels) suited to cluster development, shall be permitted and is encouraged where it affords a higher level of protection of Highlands Resources and Resource Areas than would otherwise be the case. Land management and stewardship, including best management practices and conservation and/or management plans, for the Cluster Project Area shall be subject to the provisions of Article 6 for all Highlands Area Resources including, but not limited to protection, restoration, maintenance
and mitigation, as applicable. [Note: The Highlands Council will release the Cluster/Conservation Design Development Guidelines during the Plan Conformance process to facilitate creation of the municipal cluster development ordinance. This document will include requirements for the area set aside for preservation and development as necessary to design and implement cluster development using a holistic planning approach.]

§ 8.1.4 Preservation Set Aside of Cluster Project Area Standards

A. The area set aside for preservation in a Cluster Project Area shall comprise at least 80% of the total Cluster Project Area, and shall be preserved in perpetuity for agricultural use or for environmental protection. If the Cluster Project Area is served by a public or community on-site wastewater system, the area set aside for preservation shall comprise at least 90% of the Cluster Project Area to the maximum extent this is feasible. All land preserved in perpetuity shall require a deed of easement that complies with § 9.2.3 and is enforceable and monitored by the Highlands Council, the Borough/Township/Town, and, as applicable: for environmental protection, the NJDEP Green Acres or a qualified land trust non-profit organization, or for agricultural use, the CADB or the SADC. All Preservation Set Asides shall be deed-restricted against further subdivision and shall consist of one contiguous parcel, to the maximum extent feasible, unless non-contiguous clustering is utilized.

B. When agricultural resources are preserved the following provisions shall apply:

1. The most productive Important Farmland Soils, determined in accordance with NRCS USDA soil survey data, NJDA and the local SCD shall be given priority in determining the area set aside for agricultural preservation within the Cluster Project Area.

2. The conservation easement or deed restriction and a legally enforceable Homeowner’s Agreement, where applicable, shall include Right to Farm Act provisions.

3. Retention of the original farmstead or construction of new farmsteads associated with preserved agricultural lands in cluster developments shall be permitted.

4. The preserved portion of the Cluster Project Area shall be buffered appropriately to avoid conflicts between agricultural operations and adjacent development, including the developed portion of the Cluster Project Area, and to facilitate compliance with Borough/Township/Town Right to Farm regulations.

5. This ordinance supports Sustainable Agriculture (as defined at § 3.2 and consistent with the Agriculture Retention/Farmland Preservation Plan Element of the Master Plan) and requires the implementation of best management practices on the agricultural land, including development and implementation of a Farm Conservation Plan (as defined at § 3.2 and described at § 6.10.4) that addresses the protection of water and soil resources, prepared by the USDA NRCS, TSP, appropriate agent or NJDA staff, and approved by the local SCD.

6. Community supported agriculture businesses shall be permitted within the preserved portion of the Cluster Project Area to allow homeowners to take advantage of local agricultural goods and services and to enhance the viability of the agricultural industry.

7. Requirements (e.g., bulk standards) applicable to agricultural development shall be as provided for other agricultural uses at § 6.10.3.

C. When natural resources are protected the following provisions shall apply:

DRAFT FOR MUNICIPAL REVIEW

-92-
1. Cluster development shall meet the resource management and protection requirements of the Highlands Area Resource provisions at Article 6 and shall be consistent with the policies of the Conservation Plan Element of the Master Plan.

2. Where high value natural resources are preserved, the conservation easement or deed restriction shall prohibit active recreational uses and facilities, and only allow minimal passive recreational uses dependent upon the nature of the resources. [Note: The Highlands Council intends to develop habitat valuation assessment tools that may be used to identify value on a parcel basis.]

3. Passive recreational trails shall be allowed provided they do not disturb habitat and shall be natural landscape trails constructed using native pervious materials. Where feasible, such passive recreational trails shall link to existing federal, state and local trail systems, greenways and parks.

4. Buffering techniques, management and stewardship of natural resources, and site design for the Cluster Project Area shall be used, where feasible, to enhance the existing natural resources protected within the Cluster Project Area.

§ 8.1.5 Development Set Aside of Cluster Project Area Standards

A. Cluster development shall be designed to avoid or minimize disturbance of natural resources and agricultural resources (including ARAs) of the Highlands Region in compliance with the provisions of this Ordinance.

B. The total area set aside for development in the Cluster Project Area shall not exceed 20%. To the maximum extent feasible, the developed area of the Cluster Project Area shall occupy no more than 10%, if the project area is served by a public or community on-site wastewater system.

C. Cluster development yields shall be based on the septic system yields for the Cluster Project Area at a maximum, as established at § 5.3.5, or at the development density allowed under Borough/Township/Town zoning, whichever is more restrictive. This provision shall not apply in the event of an application approved by the Highlands Council involving the use of Highlands Development Credits, where adequate infrastructure is available, and the development is consistent with the Development Transfer Plan Element [if applicable] of the Master Plan and the provisions of this Ordinance at § 5.3.

D. Water and wastewater availability, expansion, or creation for cluster development shall be in compliance with § 5.3.6 through § 5.3.8 and shall meet the resource management and protection provisions of this Ordinance.

E. Cluster residential development proposing to use septic systems shall be designed in compliance with § 5.3.5 and shall meet the resource management and protection provisions of this Ordinance.

F. All infrastructure, open space and utilities necessary to support the residential cluster development shall be located within the Development Set Aside of the Cluster Project Area (i.e. streets, common open space areas, wastewater facilities and stormwater management).

G. Where a municipality has developed and the Highlands Council has approved a plan for the aggregation of cluster developments to minimize the potential for dispersed clusters, the cluster development shall be consistent with such plan.
H. Cluster development shall incorporate smart growth principles where feasible, including but not limited to: a mix of land uses; compact building design; walkable neighborhoods; a range of housing opportunities and choices; foster distinctive communities with a strong sense of place using design techniques illustrated in the Highlands Cluster/Conservation Design Development Guidelines; preserve critical natural and agricultural resources; direct development towards existing infrastructure (i.e. water, wastewater, transportation, and community facilities); provide a variety of transportation choices (i.e. pedestrian, bicycle automobile, bus, rail); and encourage community and stakeholder collaboration in development decisions. [Note: The Highlands Council will release the Cluster/Conservation Design Development Guidelines during the Plan Conformance process to facilitate the design of cluster development.]

I. Cluster development shall incorporate LID techniques, as set forth at § 7.1.

J. Cluster development shall be designed to maintain the Highlands rural, scenic and historic character and shall consider and harmonize with existing community character with respect to architectural style, scale, massing and arrangement of buildings. Protection of the Highlands Historic, Cultural and Archaeological Resources (Exhibit 18) or the Highlands Scenic Resources (Exhibit 19) shall be considered and incorporated consistent with the provisions at § 6.11 and § 6.12. Primary criteria for site design decision-making shall include protection of existing resources and minimization of negative impacts.

K. All buffers and setbacks shall consider and incorporate or harmonize with existing natural, agricultural, historic and scenic resources and with community character. Buffers and setbacks shall be designed to consider and harmonize with the Cluster Project Area and adjacent existing development. Existing natural resources and vegetation (e.g., hedgerows/trees, woodlands or forest, wetlands, streams) shall be retained and may be enhanced as buffer features whenever feasible. Where the cluster development is integrated into an existing neighborhood or center-type development, the developed area of the cluster shall be located behind an existing hedgerow (mature trees) or screened with a new buffer as appropriate, such as a thickly planted berm of native trees or shrubs that is landscaped in such a manner as to resemble existing woodlands.

L. Site disturbance shall be restricted to clearing and grading to the minimum extent necessary to make reasonable use of the designated building envelopes, including but not limited to compliance with LID requirements at § 7.1, and retention of existing mature trees.

M. Cluster development shall be configured to minimize impervious coverage.

§ 8.1.6 Single-Family Dwelling Area, Yard and Bulk Standards
Residential cluster development shall be tailored to the characteristics of the site and its environs, and shall be designed to avoid or minimize disturbance of existing Highlands Area Resources. The following standards shall apply to residential cluster development projects. [Note: These requirements serve in the interim during the Basic Plan Conformance process until the municipality develops a cluster development ordinance approved by the Highlands Council or updates an existing cluster development ordinance that will include site design standards consistent with the municipal vision and approved by the Highlands Council.]

A. Minimum Acreage Threshold Requirements.

1. Cluster Development reliant upon on septic systems:

a) Protection Zone – 120 acres
b) Conservation Zone – 40 acres

c) Existing Community Zone – 35 acres

2. Cluster Development served by wastewater utilities:

   a) All Zones – 30 acres

B. Net Density/Intensity Threshold Requirements.

1. New single-family residential cluster development shall be subject to a net septic system density limitation, calculated on the basis of the developed portion of the Cluster Project Area (as provided at § 5.3.5). Such density (acres per septic system) shall comply with a nitrate dilution target for the developed portion of the Cluster Project of 10 mg/L or less.

2. Where new single-family residential development is proposed to rely on new or extended wastewater utilities the net density and intensity standards shall be in compliance with § 5.3.8. The net density of new single-family residential development shall comprise a minimum of two (2) dwelling units per acre (DU/acre), where the acreage included in the calculation of net density shall consist of a contiguous, unconstrained land area (as set forth at § 5.3.8 A). The number of new single-family units in the residential cluster development shall be determined through the septic system yield provisions of § 5.3.5, above.

C. Minimum Unit Number Threshold Requirement. Application of the acreage and density/intensity requirements of A. and B., above, shall yield a minimum of four (4) dwelling units.

D. Bulk Requirements. Where the applicant demonstrates and the reviewing Board finds, based upon submission of an analysis of natural and agricultural resources within the Cluster Project Area, that the site design shall be enhanced by reducing the bulk requirements of this subsection (e.g., where existing topography or vegetation provides an effective visual screen), these requirements may be reduced by up to 50%. Such reductions shall similarly apply to the extent they may be necessary to ensure compliance with the net density or intensity requirements of B.1 and B.2 above. [NOTE: These requirements may be modified and supplemented by the municipality, to ensure consistency with the definitions used in its existing zoning land use ordinance, and in consideration of community character, community vision, and the need to ensure that cluster development is achievable.]

1. Cluster Development reliant upon septic systems:

   a) Minimum lot frontage shall be 150 feet.

   b) Minimum lot width shall be 150 feet.

   c) Principal Building Setbacks

       (i) Minimum front yard setback shall be 50 feet.

       (ii) Minimum side yard setback shall be 30 feet.

       (iii) Minimum rear yard setback shall be 50 feet.
d) Accessory Building Setbacks
   (i) Minimum setback from side or rear line shall be 15 feet; if a reduction is allowed, it shall be no less than 10 feet.
   (ii) Minimum setback from other buildings shall be 15 feet; if a reduction is allowed, it shall be no less than 10 feet.

2. Cluster Development served by wastewater utilities:
   a) Minimum lot frontage shall be 100 feet.
   b) Minimum lot width shall be 100 feet.
   c) Principal Building Setbacks
      (i) Minimum front yard setback shall be 35 feet.
      (ii) Minimum side yard setback shall be 20 feet.
      (iii) Minimum rear yard setback shall be 35 feet.
   d) Accessory Building Setbacks
      (i) Minimum setback from side or rear line shall be 10 feet; if a reduction is allowed, it shall be no less than 5 feet.
      (ii) Minimum setback from other buildings shall be 15 feet; if a reduction is allowed, it shall be no less than 10 feet.

E. Other Requirements. All other development requirements for single-family dwellings, including any bulk standards not listed above (e.g., lot coverage, building coverage, building height) shall be as required pursuant to the underlying municipal zoning/land use ordinances. Cluster development within the Preservation Area may be restricted beyond these requirements, by applicable provisions of NJDEP Preservation Area Rules (e.g., 3% maximum impervious coverage).
ARTICLE 9. APPLICATION REVIEW PROCEDURES & REQUIREMENTS

§ 9.1 APPLICATION PROCEDURES
All procedural requirements regarding applications for zoning permits, construction permits, certificates of occupancy or approval, variance relief, site plan approval, subdivision approval, interpretations, appeals, and any other such application in the Highlands Area shall remain in effect as provided pursuant to the underlying municipal land use ordinances and other applicable codes and regulations in effect at the time of the application, except to the extent these may be modified by the provisions set forth herein.

§ 9.1.1 When Required
All requirements stipulating the circumstances under which such permits or approvals are required, as set forth by the underlying municipal zoning and land use ordinances, and any other applicable codes and regulatory requirements shall remain in full force and effect for the Highlands Area as provided pursuant to such regulations, inclusive of the specific definitions used therein to classify applications for review and consideration by the appropriate municipal authority, including but not limited to such terms as: “major site plan,” “minor site plan,” “major subdivision,” “minor subdivision,” “use variance,” “conditional use variance,” “change in use,” “bulk variance,” “zoning permit,” and “building permit.” In the event that the underlying municipal land use ordinances do not require issuance of a permit or other approval for any activity, improvement, or development project covered under the provisions of this Ordinance, a Highlands Resource Permit shall be required in accordance with the provisions of § 9.1.6, below.

§ 9.1.2 Highlands Act Exemptions
Pursuant to § 2.4 above, any application proposing an activity, improvement or development project that qualifies as a Highlands Act Exemption is exempt from the substantive requirements of this Ordinance. Any applicant asserting same, shall, as a condition of application completeness, and in any case prior to municipal review or approval of the application, provide evidence that the proposal qualifies as a Highlands Act Exemption as provided under either, A or B, below.

A. State Agency Determination. State Agency Determinations shall be required for all applications involving exemptions not listed and covered by the provisions at B., below. State Agency Determinations shall include either, a Highlands Applicability Determination issued by the NJDEP for a Preservation Area proposal, or an Exemption Determination issued by the Highlands Council for a Planning Area proposal, in either case, indicating that the proposal qualifies as a Highlands Act Exemption.

B. Municipal Determination. In the case of an application involving any of the specific exemptions listed in this subsection, the applicant may request and shall be deemed to have satisfied the evidentiary requirement by obtaining a Municipal Exemption Determination indicating that the proposal qualifies as a Highlands Act Exemption. By authorization of the Highlands Council (for Planning Area exemptions) or the NJDEP (for Preservation Area exemptions) regarding these specific exemptions, the applicant may rely upon the findings of a Municipal Exemption Determination to the same extent and with the same protections as would apply in the case of an Exemption Determination issued by the Highlands Council, or of a HAD issued by the NJDEP. Exemptions eligible for Municipal Exemption Determination shall include the following: [This listing will be developed after submission of the municipal petition for Plan Conformance, including applicable Highlands Act Exemptions, from the listing provided at § 2.4].

1. DRAFT FOR MUNICIPAL REVIEW
-97-
MODEL HIGHLANDS AREA LAND USE ORDINANCE

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C. Procedures. Municipal Exemption Determinations shall be issued by the Exemption Designee, as indicated at D., below, within 20 days of receipt of a request for same. Requests for Municipal Exemption Determination shall be submitted on forms provided by the Borough of Oakland and shall be accompanied by sufficient information and documentary evidence to demonstrate whether or not the proposed activity, improvement or development project qualifies, in all respects, with the applicable exemption. Insufficient or incomplete information shall form the basis for a finding that the proposal is not qualified as a Highlands Act Exemption. The Exemption Designee may consult with the Executive Director (or applicable designee) of the Highlands Council as needed in making any exemption determination. All Municipal Exemption Determinations shall be provided in writing, shall indicate the findings of the Exemption Designee, and in the case of a finding of non-exemption, shall include a statement of the reasons therefor.

D. Exemption Designee. Municipal Exemption Determinations regarding Highlands Act Exemptions shall be issued by the Borough/Township/Town [insert as applicable: e.g., Planner/Engineer/Zoning Officer who may consult with the Borough Planner and/or Engineer as necessary].

E. Appeal of Findings. The decision of the Exemption Designee may be appealed by any affected party in accordance with the provisions of the underlying land use ordinance, pursuant to N.J.S.A. 40:55D-70(a).

§ 9.1.3 Approvals Subject to Compliance
Approval of any land use-related application pertaining to the Highlands Area, whether a zoning permit application, building permit application, Application for Development (as defined at § 3.2), or any other such application, unless deemed a Highlands Act Exemption pursuant to § 9.1.2A or (provided not subsequently voided) § 9.1.2B above, is subject to compliance with the provisions of this Ordinance. Prior to any such approval, the reviewing entity shall ensure that the proposed activity, improvement or development project that is the subject of the application under its jurisdiction, is either in full compliance with all applicable provisions of this Ordinance; has received approval(s) from the entity or entities authorized to grant relief from such provision(s); or by its conditioned approval, where permitted herein, will remain subject to the issuance of such approval(s) from the entity or entities authorized to consider and issue such relief, with such approval(s) to issue prior to any land disturbance related to the proposed activity, improvement or development project.

A. Building/Construction Permit Applications. Demonstration of compliance with all applicable provisions of this Ordinance shall be required as a Prior Approval to the issuance of any building permit. Proof of such compliance shall be provided in writing, as issued by the applicable reviewing authority or authorities, including but not limited to the Borough/Township/Town [insert as appropriate: e.g., Zoning Officer, Planner, Engineer, Planning Board, Zoning Board of Adjustment, Board of Health, Health Department].

B. Zoning Permit Applications. Demonstration of compliance with all applicable provisions of this Ordinance shall be required prior to the issuance of any zoning permit or zoning approval. Where a finding of compliance requires authority or professional expertise outside the purview of the Zoning Official, such proof shall be provided in writing by the applicable reviewing authority or authorities, including but not limited to the Borough/Township/Town [insert as appropriate: Planner, Engineer, Planning Board, Zoning Board of Adjustment, Board of Health, Health Department].
Planning Board, Zoning Board of Adjustment, Board of Health, Health Department. In such instances, receipt of such findings of compliance shall constitute mandatory Prior Approvals to the issuance of any zoning permit or approval.

C. Applications for Development. Prior to granting any approval of an Application for Development, the Planning Board or Zoning Board of Adjustment, as applicable, shall make specific findings of compliance with regard to the applicable provisions of this Ordinance, such findings assisted by the advice and recommendations of the reviewing Board’s professionals, including but not limited to the Board Planner, the Board Engineer, and any specialist, expert or other consultant engaged by the Board to assist in any field of specialization. The reviewing Board shall attach certain conditions to any such approval as provided at § 9.2.3 below, but is by no means limited solely to these in making its determination on an application.

§ 9.1.4 Applications Requiring Prior Highlands Council Approval
For any application listed in this subsection, authorization by the Highlands Council shall be obtained prior to a finding of application completeness, and prior to any review or approval of the application by the applicable municipal authority.

A. Special Environmental Zone. Any application involving property located within, or partially within the Special Environmental Zone, pursuant to § 7.3 unless an HPAA with waiver has been issued by the NJDEP authorizing the proposed activity, project or improvement.

B. Critical Habitat. Any application proposing disturbance of an area designated as Critical Habitat (excluding that for which an HPAA is required from the NJDEP) pursuant to § 6.4.

C. Historic Resources. Any application involving property which is located either, among those identified as containing Highlands Historic, Cultural and Archaeological Resources (Exhibit 16), or which lies adjacent to any property containing or partially containing such Resources (excluding that for which an HPAA is required from the NJDEP) pursuant to § 6.11.

D. Scenic Resources. Any application involving property which is located either, among those identified as containing a Highlands Scenic Resource (Exhibit 17), or which lies adjacent to any property containing or partially containing such Resources pursuant to § 6.12.

E. New/Extended Utility Infrastructure. Any application proposing installation of new or extended water supply or wastewater collection/treatment utility infrastructure in any Planning Area Zone or Sub-Zone other than: a) the Existing Community Zone (excluding the Existing Community Environmentally Constrained Sub-Zone), or b) Lake Community Sub-Zone, pursuant to § 5.3.7.

F. Net Water Availability. Any application proposing the use of Net Water Availability, unless a Water Use and Conservation Management Plan has been approved by the Highlands Council, pursuant to § 6.7.11.

G. Conditional Water Availability. Any application proposing the use of Conditional Water Availability involving subwatershed in a Current Deficit Area, unless a Water Use and Conservation Management Plan has been approved by the Highlands Council, pursuant to § 6.7.11.

§ 9.1.5 Applications Requiring Prior NJDEP Approval
For any applications listed in this subsection, approval by the NJDEP shall be obtained prior to a finding of application completeness, and prior to any review or approval of the application by the applicable municipal authority.
A. **Certain Major Highlands Developments.** Any application for a Major Highlands Development in the Preservation Area as defined by the NJDEP Preservation Area rules at N.J.A.C. 7:38.

B. **New/Extended Utility Infrastructure.** Any application proposing the installation of new or extended water supply or wastewater collection/treatment infrastructure in any portion of the Preservation Area.

§ 9.1.6 **Findings of Compliance**

With regard to any application, or any specific aspect of an application for which the Highlands Council or the NJDEP has explicitly issued an approval, the applicable reviewing authority shall find that, to the extent the approval specifically addresses the provisions of this Ordinance, the applicant has demonstrated compliance. Such approvals shall not be construed to waive or obviate other applicable provisions of this Ordinance or of any other applicable municipal or non-municipal ordinances, regulations or requirements. With respect to all other findings of compliance, the provisions of this subsection shall apply.

A. **Professionals Required.** Findings of compliance with the provisions of this Ordinance shall be provided only by individuals qualified to review and make such determinations. In many but not all instances these shall require licensed, certified or otherwise qualified professionals such as scientists, engineers, planners or geologists. Fee and escrow requirements associated with applications requiring approval under this Ordinance, shall reflect the reasonable anticipated expenses associated with processing and reviewing such applications, as provided at § 9.3 below. The following professionals shall be authorized to review and provide findings pursuant to this Ordinance, and shall be designated as required, by the municipal Governing Body or reviewing Planning Board or Zoning Board of Adjustment, as applicable:

1. **Use, Density, Intensity & Other Bulk Requirements:** Professional Planner; Professional Engineer; Zoning Officer

2. **Forest Resources:** Certified Tree Expert; Forester; Forest Scientist/Ecologist

3. **Highlands Open Waters, Riparian Areas, and Lake Management Areas:** Limnologist, Wetlands or Riparian Scientist/Ecologist

4. **Steep Slopes:** Professional Engineer; Topographic Surveys: Licensed Land Surveyor

5. **Carbonate Rock Areas:** Geotechnical Engineer; Geologist; other Professional Engineer or Geological Expert qualified and experienced in geological/geotechnical aspects of development

6. **Water Conservation and Deficit Mitigation, Prime Ground Water Recharge Areas, Wellhead Protection Areas, Stormwater Management:** Professional Engineer; Water Resources Engineer; Environmental Engineer

7. **Low Impact Development:** Landscape Architect, Professional Engineer; Environmental Engineer; Professional Planner qualified and experienced in applicable areas

B. **Zoning and Building/Construction Permit Applications.** Where a zoning or building/construction permit application (or request for approval) is not preceded by an Application for Development under the purview of the Planning Board or Zoning Board of Adjustment, the reviewing official shall rely upon the determination(s) of the individual designated in A., above for findings of compliance with respect to the applicable provisions of this Ordinance.

DRAFT FOR MUNICIPAL REVIEW
1. All determinations by the qualified professional shall be determinative in the disposition of any zoning or building/construction permit application with respect to required Prior Approvals.

2. Where the professional determines that an approval may be granted subject to certain conditions, such conditions shall be addressed prior to the issuance of any permit or approval by the building or zoning official, unless in the estimation of the professional, satisfaction of the required conditions of approval will not be compromised by issuance of the zoning or building/construction permit and are ensured by other means, such as withholding of any final certificates of occupancy or approval.

3. The findings of the review professional shall be provided in writing to both the municipal official(s) responsible for the review and disposition of the zoning or building/construction permit, and to the applicant. Where such findings indicate that the application is not compliant with the applicable provisions of this Ordinance, the review professional shall provide a statement identifying the reasons therefor. Where the review professional indicates that an approval may be granted pending satisfaction of certain conditions, a statement and explanation of the conditions to be attached shall be set forth as well as the reasons therefor.

4. The findings of the review professional may be appealed by any affected party in accordance with the provisions of the underlying land use ordinance, pursuant to N.J.S.A. 40:55D-70(a).

5. The professional review process shall occur as follows:

   a) Upon notice from the municipal official(s) responsible for the review and disposition of the zoning or building/construction permit that a Prior Approval is required, it shall be the applicant’s responsibility to prepare a request for review and issuance of such approvals by the designated municipal professional(s).

   b) The applicant shall provide all of the documents and materials required for submission under an Application for Development pursuant to § 9.2 below, to the extent they apply with respect to the particular resources and Ordinance provisions at issue, for review by the professional.

   c) The professional shall provide a completeness determination in writing, within thirty (30) days of receipt of the application materials, which in the event of an incomplete application, shall indicate the reasons therefor. The professional shall have the authority to waive submission of items he or she finds unnecessary or irrelevant to the evaluation and the required report of findings.

   d) The professional shall review and provide a report of findings to both the municipal official(s) and the applicant within forty-five (45) days of the date on which the application is deemed complete.

   e) In the event of a Carbonate Rock Investigation pursuant to § 6.5.3 above, the professional report of findings shall be provided in accordance with the program and scheduling as provided therein.

   f) The review professional shall have authority to issue such waivers and exceptions as provided only in accordance with Article 10, below.
C. **Highlands Resource Permit Applications.** In the event that the underlying municipal land use ordinances do not require issuance of a zoning or building permit, or approval of an Application for Development through which compliance with the provisions of this Ordinance may be demonstrated, the provisions herein shall apply.

1. Any person proposing an activity, improvement or development project that will affect a Highlands resource, Resource Area, or Protection Area, shall obtain a Highlands Resource Permit in accordance with this section.

2. Applications shall be made on forms provided by the municipality requiring identification of the owner of the property or properties at issue, the tax block and lot, street address, the extent, location and type of activity proposed, and by submission of a Consistency Determination Report from the Highlands Council website, an indication of the resources potentially affected by the proposed activity.

3. The designated review authority for such applications shall be the Borough/Township/Town Zoning Officer, Planner or Engineer.

4. The review and disposition of such applications shall occur as provided for zoning and building/construction permits, in the preceding sections, with approvals being issued only upon a finding of compliance.

D. **Applications for Development.** With respect to Applications for Development, findings of compliance shall be provided by the applicable professional(s) through the process of review and consideration undertaken by the Planning Board or Zoning Board of Adjustment. The reviewing Board (or its committee(s), if applicable) shall consider all such findings during the course of the Application for Development, in conjunction with all other relevant information and requirements in rendering a final decision in any matter.

§ 9.2 **APPLICATIONS FOR DEVELOPMENT**
The provisions of this section shall apply to any Application for Development under the jurisdiction of the Planning Board or Zoning Board of Adjustment, as provided under § 3.2 above.

§ 9.2.1 **Notice & Reporting Requirements**
The provisions of this section shall apply in addition to all requirements concerning public notice for Applications for Development as provided under the MLUL and required pursuant to the underlying municipal land use ordinances.

A. **Notice of Application to Highlands Council.** The applicant for any Application for Development shall provide notice to the Highlands Council at least ten (10) days prior to the date on which the application is scheduled for consideration by the local Board. A copy of the complete application shall accompany such notice regarding any Application for Development involving the potential disturbance of two (2) acres, or more, or a cumulative increase in impervious coverage of one (1) acre, or more. The applicant shall provide copies of any subsequent revisions to such applications to the Highlands Council at the same time these are provided to the reviewing Board. If such plans or plats have been prepared in digital form, they shall be provided to the Highlands Council in a digital format that meets Highlands Council standards for such submissions.
B. **Scenic Resource Notice Requirements.** Where a project site falls within a Highlands scenic resource area designated by the Highlands Council, or within the Scenic Resources Tier of a Lake Management Area, that crosses municipal or county boundary lines, public notice requirements shall, in addition to the applicable notice requirements of the MLUL, incorporate any supplemental notice provisions as set forth in the adopted Scenic Resource Management Plan.

C. **Notice of Decision Required.** The reviewing Board shall provide a certified copy of the fully-executed resolution memorializing its final decision regarding any Application for Development to the Highlands Council within ten (10) days of its adoption. This provision shall apply in all cases, whether the Board approves the Application for Development, denies it, or approves it with conditions.

§ 9.2.2 **Board Decisions Subject to Highlands Council Call-Up**
All Board decisions pertaining to Applications for Development are subject to call-up and subsequent review by the Highlands Council in accordance with procedural requirements and timeframes established pursuant to the Highlands Act. The Highlands Council may, on notice to the applicant within 15 days of receipt of the memorializing resolution of the reviewing Board, require a hearing on the application. In that case, subsequent to the hearing the Highlands Council may approve the Application for Development, deny it, or issue an approval with conditions.

§ 9.2.3 **Conditions of Approval**
The following conditions of approval shall be attached to any Application for Development approved pursuant to the MLUL, and the provisions of § 9.1, above.

A. **No Land Disturbance.** No land disturbance approved in connection with the Application for Development shall occur until and unless, either:

1. The Highlands Council call-up period has expired without issuance of a notice requiring a hearing on the application by the Highlands Council; or

2. The Highlands Council has noticed for such hearing, has reviewed the approval pursuant to N.J.S.A. 13:20-17(a)1 and has determined that the approval is consistent with the Regional Master Plan.

B. **Amendments.** In the event that Highlands Council review of an approved Application for Development results in a finding that the plans must be modified, the applicant shall amend the application accordingly and submit the amended application to the reviewing Board for approval. Such submissions shall include the written findings and notice of decision of the Highlands Council.

C. **Conservation Restrictions.** The applicant shall commit to and, as a condition of approval, perfect a conservation restriction on the undisturbed portions of any agricultural, environmental, geological, water or resource features of the property that are regulated under this Ordinance.

1. The conservation restriction must meet applicable requirements of the Highlands Council for a Highlands Council Conservation and Land Stewardship Easement, and shall be enforceable by the Highlands Council and at least one of the following as determined by the reviewing entity: the municipality; the CADB or SADC (for farmland), NJDEP Green Acres Program, or a qualified land trust non-profit organization. All such easements shall require and ensure periodic monitoring of easement restrictions protecting Critical Habitat, species, and ecological communities from changes in land use or management practices that would impair such resources.
2. The conservation restriction shall run with the land on which the approved project is located, shall apply to all lots subdivided from that land and sold or transferred to other persons, and shall be binding upon the landowner and his or her successors in interest. To ensure that notice of the conservation restriction is provided to all present and future interested parties, the landowner or contract purchaser receiving the approval shall:

   a) Record the conservation restriction(s) in the office of the County Clerk or Register, as applicable prior to commencement of any work authorized under the approval; and

   b) Ensure that a copy of the conservation restriction is provided to the Highlands Council and to the Municipal Clerk with a request that it be placed in the file for the lot containing the approved project.

3. The conservation restriction(s) shall describe and include all regulated features on the property, including all Highlands Resource Areas, stormwater management facilities, any required mitigation and relevant site conditions such as encumbrances or known contamination.

4. The conservation restriction shall include a survey and a metes and bounds description of the entire restricted area.

5. The language to be included in a conservation restriction shall be reviewed and approved by the Municipal or Board Attorney, as applicable.

A. **Musconetcong National Scenic and Recreational River.** Any applications requiring federal permits, receiving federal funding or involving other federal actions and that may affect resource values of the Musconetcong National Scenic and Recreational River, shall be conditioned upon National Park Service review of the disturbance pursuant to section 10(a) of the National Wild and Scenic Rivers Act.

B. **Approvals Conditioned on State Approvals.** All approvals shall be subject to the approval of any and all State agencies or other authorities having jurisdiction over any aspect or aspects of the approved Application for Development.

C. **As-Built Surveys Required.** Prior to issuance of any final Certificate of Occupancy or Approval, or to the release of any performance bonding held in relation to the approved Application for Development, the applicant shall provide an “as-built” survey depicting the final site conditions.

D. **Submission of Final Plans/Plats to Highlands Council.** The applicant shall provide a copy of any final site plan or subdivision plat to the Highlands Council. If such plans or plats have been prepared in digital form, they shall be provided to the Highlands Council in a digital format that meets Highlands Council standards for such submissions.

§ 9.3 **APPLICATION FEE & ESCROW REQUIREMENTS**

The application fee and escrow requirements of this subsection shall apply in addition to all existing fee and escrow requirements, including procedural and legal requirements, as set forth in the underlying municipal land use ordinances. All application fees and escrows shall be managed and dispensed as prescribed under all applicable state and local requirements, including but not limited to those of the MLUL and the Uniform Construction Code. The municipality may modify the requirements of this section and set applicable fees and escrows as it deems appropriate.
A. Municipal Exemption Determinations. The fees provided herein shall apply to applications for Municipal Exemption Determinations pursuant to § 9.1.2 of this Ordinance.

1. Municipal Exemption Determination: $_______

2. Denied Application Amended for Compliance: $_______

B. Highlands Resource Review. The fee and escrow requirements herein shall apply to applications for Highlands Resource Permits, and to Zoning Permit and Building/Construction Permit applications for which Highlands Resource review is required as a prior approval pursuant to § 9.1.6.

1. Highlands Resource Review Fees
   
   a) Applications involving determinations regarding permitted/prohibited uses, carbonate rock phase I investigation, water use and conservation, wellhead protection, prime ground water recharge, low impact development, or any combination of these: $_______

   b) Applications involving determinations regarding any one or combination of the following: density or intensity of development standards, forest resources, Highlands open waters, riparian areas, lake management, steep slopes, carbonate rock phase II investigation, water deficit mitigation, or stormwater management (including stormwater low impact development: [The municipality may wish to set fee for these applications that are higher than those in 1.a above to cover the additional administrative costs involved in arranging for special professional services contracts.]) $_______

   c) Applications involving determinations regarding any combination of items listed in both 1.a and 1.b, above, shall be subject to the application fee listed at 1.b.

2. Escrow Deposit Requirements
   
   a) Applications requiring compliance determinations pursuant to any Highlands resource component listed in the following table shall be accompanied by the escrow deposits therein indicated. Where an application involves more than one of the listed application compliance components, escrow deposits shall be cumulative.

<table>
<thead>
<tr>
<th>Application Compliance Component</th>
<th>Escrow Deposit</th>
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</thead>
<tbody>
<tr>
<td>a) Density or Intensity Standards</td>
<td></td>
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<tr>
<td>b) Forest Resources</td>
<td></td>
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<tr>
<td>c) Highlands Open Waters and/or Riparian Areas</td>
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<tr>
<td>d) Lake Management</td>
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<td>e) Steep Slopes</td>
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<td>f) Carbonate Rock, Phase II Investigation</td>
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<td>g) Water Deficit Mitigation</td>
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<td>h) Stormwater Management and Stormwater LID</td>
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   b) Escrow deposits shall be used by the municipality to cover the costs of professional reviews associated with the respective Highlands resource components. Where any escrow account is depleted to an amount equaling 25% or less of the original deposit amount, the status and progress of the application shall be reviewed by the applicable municipal official(s), and the professional responsible for Highlands resource review shall determine whether account replenishment is necessary, and if so, by what amount. On notice from the municipality of any
such replenishment requirement, the applicant shall provide the additional escrow accordingly and within such timeframes as therein stated.

C. Applications for Development. All fee and escrow requirements pertaining to Applications for Development shall remain as set forth in the underlying municipal land use ordinances, with the adjustments provided herein as a supplemental requirement, applicable in the case of any application for which the reviewing Board requires professional assistance in making findings of compliance pursuant to § 9.1.6.

1. The required escrow deposit for applications involving determinations regarding any one or more of the following resource components shall be calculated by multiplying the existing escrow deposit requirement by 1.25: carbonate rock phase I investigation, water use and conservation, wellhead protection, prime groundwater recharge, low impact development.

2. The required escrow deposit for applications involving determinations as to any of the following resource components shall be calculated by multiplying the existing escrow deposit requirement by 0.25 for each applicable item, and adding each to the existing escrow deposit amount: density or intensity of development standards, forest resources, Highlands open waters, riparian areas, lake management, steep slopes, carbonate rock phase II investigation, water deficit mitigation, or stormwater management (including stormwater low impact development).

3. The required escrow deposit for any application involving determinations listed at both C.1 and C.2, above, shall be calculated by multiplying the existing escrow deposit requirement by 0.25 and adding the result to the amount determined under C.2.

§ 9.4 Submission Checklist Requirements
All applicants seeking approval for any activity, improvement, or development project covered under the provisions of this Ordinance, shall submit the materials required in this section for review by the applicable municipal authority. In no case shall an Application for Development (as defined in Article 3) be deemed complete or scheduled for Board review until such time as the Board or its Completeness Designee has either received or granted a waiver of submission on each required item. Applications for Highlands Resource Permits and for Zoning Permits and Building/Construction Permits requiring Highlands Resource review shall not be considered for such review until such time as the reviewing authority has either received or granted a waiver of submission as to each required item.

§ 9.4.1 General Requirements
A. Application Fees and Escrow Deposits
B. Completed Application Forms (_____ Copies)
C. For Applications Claiming Highlands Act Exemptions (Not Eligible for Submission Waiver):
   1. Municipal Exemption Determination for any eligible exemption listed at § 9.1.2 or
   2. Highlands Applicability Determination from the NJDEP for a Preservation Area application; or
   3. Highlands Exemption Determination from the Highlands Council for a Planning Area application.
D. For Applications Requiring Prior Approvals (Not Eligible for Submission Waiver):

1. For any application affecting property in the Special Environmental Zone pursuant to either § 5.2.1 or § 7.3.2:
   a) An HPAA with waiver issued by the NJDEP for any application involving a Major Highlands Development.
   b) A Special Environmental Zone Waiver issued by the Highlands Council for any application involving a non-Major Highlands Development.

2. For any application proposing disturbance of Critical Habitat pursuant to § 6.4.2, Notice of Authorization issued by the Highlands Council.

3. For any application proposing development within the Carbonate Rock Area pursuant to § 6.5.2, copies of Phase I Geologic Investigation report, Phase II Geotechnical Evaluation Report if applicable, associated certification(s) of sufficiency issued by Municipal Engineer, and all written evaluations, reports, recommendations issued by the Municipal Engineer pursuant to § 6.5.3.

4. For any application proposing development within a Carbonate Rock Drainage Area pursuant to § 6.5.4, copies of Phase I Geologic Investigation report, associated certification of sufficiency issued by Municipal Engineer, and all written evaluations, reports, recommendations issued by the Municipal Engineer pursuant to § 6.5.3.

5. For any application proposing an increase in the use of Net Water Availability or Conditional Water Availability pursuant to § 6.7, Notice of Findings issued by the Highlands Council pursuant to § 6.7.

6. For any application affecting a Historic, Cultural or Archaeological Resource pursuant to § 6.11, Notice of Authorization issued by the Highlands Council pursuant to § 6.11.

7. For any application affecting a Scenic Resource pursuant to § 6.12, Notice of Authorization issued by the Highlands Council pursuant to § 6.12.

8. For any application proposing installation of new or extended water supply or wastewater collection/treatment utility infrastructure in any Planning Area Zone or Sub-Zone other than: a) the Existing Community Zone (excluding the Existing Community Environmentally Constrained Sub-Zone), or b) Lake Community Sub-Zone, pursuant to § 5.3.7, Notice of Authorization issued by the Highlands Council.

9. For any application for a Major Highlands Development in the Preservation Area as defined by the NJDEP Preservation Area rules at N.J.A.C. 7:38, an HPAA issued by the NJDEP.

10. For any application proposing the installation of new or extended water supply or wastewater collection/treatment infrastructure in any portion of the Preservation Area, an HPAA with waiver issued by the NJDEP.

E. All mapped information shall be provided for the full parcels affected by the proposed project and a distance of 200 feet from the outer boundaries of all affected parcels. Where this Ordinance requires field surveys of resources, the field survey requirement shall apply only to the affected parcels and shall

DRAFT FOR MUNICIPAL REVIEW
be conducted by qualified professionals. The area within 200 feet of the affected parcels may be mapped using existing data and is not subject to field surveys. Where field surveys are not required for mapping of Highlands resources, the application shall use Highlands Council GIS data. In addition to paper plans, initial plan sets shall be submitted on CD (or other acceptable archival electronic format) in the most recent version of ESRI Shape files (.shp) and in the most recent version of Adobe Acrobat (.pdf) format. The plans must be geo-referenced using New Jersey State Plane Coordinates NAD83 (or the most current New Jersey State Plane coordinate system). The final approved revision shall be submitted in the same manner. Plan revisions (subsequent to the initial plan sets but prior to final approved version) shall be submitted in .shp and .pdf either in archival electronic format or via email. Projects that will disturb less than 2 acres and will create less than 1 acre of net impervious surface may submit geo-referenced CAD files in lieu of the ESRI Shape files.

F. Existing features and site analysis plan, identifying and mapping:
   1. Highlands Zone and Sub-Zone boundaries;
   2. Highlands Resource Areas and Special Protection Areas;
   3. All water bodies (rivers, lakes, ponds, reservoirs, etc);
   4. All existing structures (including archaeological features, ruins and stone walls);
   5. Topographic features including but not necessarily limited to steep slopes and rock outcrops;
   6. All significant physical features; and
   7. Existing trails and greenways, and preserved lands and farmland.

G. Plans showing the proposed area of disturbance for all aspects of the development, including but not limited to roads, utilities, buildings, driveways, landscaped areas, and all appurtenant structures.

H. Plans showing the proposed grading, soil conservation plan, and sediment and soil erosion control plan.

I. Plans showing proposed conservation easements to be provided pursuant to § 9.2.3. The proposed easement shall be depicted in the plans, inclusive of plan notes specifying the location and construction of clear and permanent on-site monuments, such as concrete posts, designed to minimize the need for land clearing and avoid obstruction of wildlife movement.

J. Plans documenting baseline conditions in all areas designated for conservation easements, deed restrictions or other means of resource preservation.

K. Architectural elevation renderings, if structures are proposed (preliminary for subdivision applications).

L. A list of any pre-existing encumbrances affecting the property (e.g., easements, deed restrictions, covenants).

M. Copies of any related surveys, site plans, professional reports and environmental site assessments.
§ 9.4.2 Forest Resources

A. Information identifying forests using the Highlands Council Forest Resource Area, Forest Integrity Indicators, and Total Forest GIS layers for forest resources.

B. For development in the Preservation Area, provide information identifying upland forests existing outside of the limits of the Total Forest Area by use of the Forest Determination methodology of APPENDIX A (N.J.A.C. 7:38-3.9).

C. In the case of any proposed disturbance pursuant to § 6.1, Forest Impact Report pursuant to § 6.1.7 and Forest Mitigation Plan pursuant to § 6.1.8.

§ 9.4.3 Highlands Open Waters and Riparian Areas

A. Information identifying Highlands Open Waters and their buffers and Riparian Areas as these are defined in this Ordinance.

B. Plans showing all Highlands Open Waters, Highlands Open Waters buffers, and Riparian Areas, based on this Ordinance and the NJDEP Preservation Area rules at N.J.A.C. 7:38-3.6.

C. Narrative and mapped description of the extent to which the application is consistent with the Highlands Open Waters and Riparian Areas requirements of this Ordinance.

D. **Disturbances:** Any application proposing to disturb Highlands Open Waters buffers and/or Riparian Areas shall also provide:

1. Environmental Impact Statement or Review as submitted to the Highlands Council in support of its consistency determination as required under the Highlands Council Project Review Procedures.

2. Hydrology, drainage and flooding analysis report or reports prepared in support of conformance with the municipal stormwater management plan and regulations adopted pursuant to N.J.A.C. 7:8, or a Flood Hazard Area Control Act application pursuant to N.J.A.C. 7:13.

§ 9.4.4 Steep Slopes

A. Mapping of steep slope areas in accordance with the provisions of the NJDEP Preservation Area rules at N.J.A.C. 7:38-3.8.

B. Information identifying steep slopes using the classes of Steep Slope Protection Area in accordance with the Steep Slopes provisions of this Ordinance.

C. Plans showing all steep slopes, with clear delineation of the slope classes and Steep Slope Protection Areas based on the Steep Slopes provisions of this Ordinance and the NJDEP Preservation Area rules at N.J.A.C. 7:38-3.8.

D. Narrative and mapped description of the extent to which the application is consistent with the Steep Slopes provisions of this Ordinance.

E. **Major Disturbances:** Any application proposing to disturb 5,000 square feet or more within Steep Slope Protection Areas shall also provide:

**DRAFT FOR MUNICIPAL REVIEW**

-109-
1. Environmental Impact Statement or Review as submitted to the Highlands Council in support of its consistency determination, including specifically the impact of proposed development within Constrained or Limited Constrained Steep Slopes on: Highlands Regional Scenic Resources; aesthetic impacts related to visibility and aesthetic quality of the proposed development; the extent of proposed landform grading, stabilization and retaining structures; and impacts on other environmental features addressed by the Steep Slopes provisions of this Ordinance.

2. Hydrology, drainage and flooding analysis report or reports prepared in support of conformance with the municipal stormwater management plan and regulations adopted pursuant to N.J.A.C. 7:8, or a Flood Hazard Area Control Act application pursuant to N.J.A.C. 7:13.

§ 9.4.5 Critical Habitat

A. Information identifying Critical Habitat using the Critical Habitat GIS layers for Critical Wildlife Habitat, Significant Natural Areas, and Vernal Pools, as defined in the Critical Habitat provisions of this Ordinance.

B. For a major Highlands development in the Preservation Area, include information identifying Critical Habitat per NJDEP’s Highlands Resource Area Determination requirements for location, presence, and/or absence of “rare, or threatened and/or endangered wildlife habitat” at N.J.A.C. 7:38-4.1(d)(3) and “rare or endangered plant species habitat” at N.J.A.C. 7:38-4.1(d)(4).

C. A Critical Habitat Survey Report as defined in the Critical Habitat provisions of this Ordinance.

D. A letter from NJDEP-Natural Heritage Program Database specifying all species found on and adjacent to the property.

E. Plans showing all Critical Habitat as defined in the Critical Habitat provisions of this Ordinance and the NJDEP Preservation Area rules at N.J.A.C. 7:38-3.11.

F. Narrative and mapped description of the extent to which the application is consistent with the Critical Habitat provisions of this Ordinance.

§ 9.4.6 Carbonate Rock Areas

A. Provide a multi-phased geotechnical site investigation (if the results of the Phase I of the investigation warrant a Phase II investigation) to locate any potential karst features in the Carbonate Rock Area and potential hazards to public health and safety, structures, and ground water quality consistent with the Carbonate Rock provisions of this Ordinance.

B. Plans showing any and all identified karst features as defined in the Carbonate Rock provisions of this Ordinance, and all areas that drain to the Carbonate Rock Area.

C. Narrative and mapped description of the extent to which the application is consistent with the Carbonate Rock provisions of this Ordinance.

§ 9.4.7 Lake Management Areas

A. Information identifying the Lake Management Area and Tier(s) as defined in the Lake Management Area provisions of this Ordinance.
B. Plans showing all Lake Management Areas, with clear delineation of the Lake Management Tiers as defined Lake Management Area provisions of this Ordinance.

C. Narrative and mapped description of the extent to which the application is consistent with any applicable Lake Management Plan in compliance with all provisions of the Lake Management Area provisions of this Ordinance.

§ 9.4.8 Water Conservation and Deficit Mitigation

A. Information identifying project water demand data, water supply source, and water utility information.

B. Narrative of the extent to which the application exhibits compliance with the municipal Water Conservation and Water Deficit Mitigation provisions of this Ordinance.

C. In the absence of an approved municipal or subwatershed-based Water Use and Conservation Management Plan (WUCMP), Highlands Council approval of the water conservation and deficit mitigation measure(s) proposed for the development.

D. For municipalities where a WUCMP has been approved, submit statement and narrative demonstrating how the project is in compliance with the provisions of the WUCMP.

E. Information on the project’s impact on municipal water availability.

1. Identify the water supply source HUC14(s) for the project, including net water availability, deficit status, conditional availability (as applicable).

2. A water use analysis indicating the projected total water use and consumptive water use for the project. The analysis must show annual average and summer seasonal peak usage for the project.

3. Narrative describing the alternatives for water conservation measures that have been evaluated and those that are being implemented, including both on-site measures and off-site measures. Where off-site measures are proposed, provide accompanying documentation demonstrating applicant’s right of access to and authority to construct, install or otherwise implement such measures at the off-site location, as well as to ensure on-going monitoring and maintenance of same. Where off-site mitigation measures are provided by a third party (e.g., water reductions from a utility), provide third party certification that the mitigation has been implemented, will be maintained, and not utilized as mitigation for other projects.

4. If deficit mitigation is required (for deficit subwatersheds), include analysis describing how mitigation is to be addressed. Include plan identifying location of mitigation measures, and providing detailed specifications and calculations supporting mitigation amounts.

§ 9.4.9 Prime Ground Water Recharge Areas

A. Information and maps identifying Prime Ground Water Recharge Areas as defined in the Prime Ground Water Recharge provisions of this Ordinance.

B. Narrative and mapped description of the extent to which the application is consistent with the Prime Ground Water Recharge provisions of this Ordinance.
C. **Disturbances**: Any application proposing to disturb a Prime Ground Water Recharge Area shall provide:

1. Environmental Impact Statement or Review as submitted to the Highlands Council in support of its consistency determination

2. Hydrology, drainage and flooding analysis report or reports prepared in support of conformance with municipal stormwater management plan and regulations pursuant to N.J.A.C. 7:8 or a Flood Hazard Area Control Act application pursuant to N.J.A.C. 7:13.

3. Site specific Geologic, Hydrogeologic and Pedologic analysis to determine the overall recharge rate and volume and to determine the location with the lowest recharge potential within the PGWRA. The submitted analysis report shall include appropriately scaled geologic, hydrogeologic and pedologic maps and cross sections showing all pertinent geologic, hydrogeologic and pedologic features, etc. As well, the report shall also present all relevant analytical results, calculations and other graphical data.

§ 9.4.10 **Stormwater Management**

A. A map (or maps) at the scale of the Stormwater Management Facilities map indicating the location of existing and proposed buildings, roads, parking areas, utilities, structural facilities for stormwater management and sediment control, and other permanent structures. The map(s) shall also clearly show areas where alterations will occur in the natural terrain and cover, including lawns and other landscaping, and seasonal high ground water elevations. All maps must include to the extent present on-site, delineation of Carbonate Rock Areas, Prime Ground Water Recharge Areas, and Wellhead Protection Areas.

B. A map, at the same scale as the Stormwater Management Facilities map, depicting the location and physical description of Low Impact Development management practices used to minimize the creation or increase of stormwater runoff due to development or disturbance of the site.

C. Any major development application (as defined by N.J.A.C 7:8) proposing to disturb one acre or add one-quarter acre of impervious surface shall also provide:

1. **Environmental Site Analysis**. The applicant shall submit a written description along with the drawings of the natural resources of the site. The description of resources must include at minimum: Carbonate Rock Areas, Prime Ground Water Recharge Areas, Highlands Open Water Buffers and Riparian Areas, and Wellhead Protection Areas.

2. **Topographic Base Map**. A topographic base map that extends a minimum of two hundred (200) feet beyond the limits of the proposed development, at a scale not less than 1”=200’, showing two (2) foot contour intervals. The map shall be based on surveyed data on-site and either aerial survey data or Highlands Council LiDAR information for the off-site portion, and shall indicate the following: drainage patterns, surface water flow paths, contributing drainage areas and receiving waters, steep slopes, soils types, all Highlands Open Waters and buffers. If the topographic base map does not display all upstream contributing drainage information, then a separate map using the Highlands Council LiDAR information or aerial survey data with an equivalent resolution, shall be provided.
3. **Stormwater Management Facilities Map.** A map, at a scale not less than 1”=50′, depicting the following information: roads, utilities, building sites, driveways, landscaped areas, and all appurtenant structures, total area of disturbance, proposed surface contours and drainage areas, land area to be occupied by the stormwater management facilities and vegetation types thereon, and details of the proposed plan to manage stormwater. Details shall be included of all stormwater management facility designs, including cross-sections and elevations for each BMP, with any associated performance data (e.g. water quality treatment efficiency, recharge/ infiltration data, stage-storage-discharge data).

4. **Hydrologic and Hydraulic Calculations** (ground water recharge and stormwater runoff rate, volume and quality). The applicant shall submit comprehensive hydrologic and hydraulic design calculations for the pre-development and post-development conditions, accounting for the impacts of site conditions, development, Low Impact Development techniques and stormwater management facilities. Detailed soil and other environmental conditions on the portion of the site proposed for installation of any stormwater BMPs, including soils data used to correlate permeability for proposed infiltration/recharge stormwater BMP shall be included.

5. Other hydrologic, drainage or flooding analysis report or reports prepared in support of conformance with the municipal stormwater management plan and regulations adopted pursuant to Plan Conformance, N.J.A.C. 7:8, or a Flood Hazard Area Control Act application pursuant to N.J.A.C. 7:13.

6. Plans, elevations, typical cross-sections and construction details for any structural stormwater management measure.

7. **Analysis.** A written statement by a competent professional demonstrating and concluding that the stormwater management plan is consistent with the Stormwater Management provisions of this Ordinance, NJDEP Stormwater Rules N.J.A.C. 7:8, and (for major Highlands development in the Preservation Area) NJDEP Highlands Preservation Area Rules at N.J.A.C. 7:38-6.

§ 9.4.11 Wellhead Protection

A. Information identifying Wellhead Protection Areas (WHPAs) as defined in the Wellhead Protection provisions of this Ordinance. Where more than one WHPA Tier intersects a particular project site, identify the more protective Tier as applicable to the entire project site or demonstrate the appropriate Tier for each Potential Contaminant Source on the project site.

B. Identification and description of each major and minor Potential Contaminant Source on the property, whether existing or proposed

C. Narrative and mapped description of the extent to which the application is consistent with the Wellhead Protection provisions of this Ordinance, and with the Areawide WQMP Plan.

D. Plans showing all WHPAs and Tiers based as defined by the Wellhead Protection provisions of this Ordinance.

E. Copies of any related hydrogeologic/geologic reports, remediation reports, results of soil or ground water analyses or other environmental assessment reports (i.e., Phase I or Phase II reports)
§ 9.4.12  Septic System Design and Maintenance

A. Narrative and mapped description of the extent to which the application is consistent as to location, size, and site suitability for proposed individual septic disposal systems, through compliance with the Septic System Design and Maintenance provisions of this Ordinance and applicable requirements of N.J.A.C. 7:9A.

B. Plans showing the proposed location and configuration of the septic system(s), including required separation distances as set forth in N.J.A.C. 7:9A. Plan notes must indicate that the septic system(s) shall be designed in accordance with N.J.A.C. 7:9A, and that design plans and details are subject to the approval of the Health department. In addition, plans must designate a reserve septic disposal field having suitable soils, location, size, and configuration sufficient to also achieve compliance with N.J.A.C. 7:9A.

C. Plans and accompanying narrative providing proposed deed restrictions to be imposed through the development approval to prohibit the installation or construction of any permanent improvements within the reserve disposal area(s), and to require that it be shown on all plans and/or referenced within any future applications for permits or improvements to the property.

§ 9.4.13  Agricultural Resource Areas (ARA)

A. Information identifying ARA as defined in the Agricultural Resources Protection provisions of this Ordinance.

B. Information identifying soil quality, including Prime, Statewide, Unique, and Locally Important farmland soils and any preserved land (agriculture and open space, by fee simple or easement) affecting properties adjacent to the site.

C. Plans showing all ARAs as defined in the Agricultural Resources provisions of this Ordinance.

D. Narrative and mapped description of the extent to which the application is consistent with the Agricultural Resources provisions of this Ordinance.

E. Additional checklist items for Cluster/Conservation Design Development (see below) where a proposed development triggers mandatory clustering to preserve agricultural land in the ARA.

F. Major Disturbances: Any application proposing to reduce or eliminate agricultural lands within the ARA shall also provide Environmental Impact Statement or Review as submitted to the Highlands Council in support of its consistency determination.

§ 9.4.14  Historic Resource Protection

A. List of sites or districts identified in the Highlands Historic and Cultural Resource Inventory that are located adjacent to or within the project site, or within line of sight of areas proposed to be disturbed on the project site.

B. A report pursuant to the Historic Preservation Ordinance, identifying other known and potential historic, cultural and/or archaeological resources, including but not limited to those which are listed on the Highlands Historic and Cultural Resource Inventory. Potential historic resources should include any structure that is 50 or more years old, any unused or

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DRAFT FOR MUNICIPAL REVIEW

-114-
abandoned cemetery or burial place, is a generally recognized historic resource within the community, or has been proposed for recognition as worthy of historic resource protection.

C. Narrative description of the extent to which the application is consistent with the policies and objectives of the municipal Highlands Master Plan Element including compliance with the Historic Preservation Ordinance [add citation if adopted or delete ordinance reference].

D. In addition to the architectural elevation renderings required above, provide descriptions and illustrations of how proposed new structures physically relate to any historic resources identified through the above.

§ 9.4.15 Scenic Resource Protection

A. For any application proposing improvements to lands located within the boundary lines delineated by a Scenic Resource Management Plan approved by the Highlands Council, a graphic illustration of the proposed improvements superimposed to scale, over actual photographs of the scenic resource area taken from representative locations surrounding the site.

B. For any application proposing improvements to lands located within the boundary lines delineated by a Scenic Resource Management Plan approved by the Highlands Council that crosses municipal and/or county boundary lines, any supplemental submission materials as may be prescribed by the adopted Scenic Resources Management Plan.

C. Narrative description of the extent to which the application is consistent with scenic resource protection policies of the Scenic Resource provisions of this Ordinance and any Scenic Resource Management Plan approved by the Highlands Council, including a discussion of how scenic resources will be protected from encroachment and how the development proposal will enhance the scenic resources, where appropriate. Describe measures to minimize negative impact to scenic resources, and if impacts are unavoidable, detail other options considered and reasons for choosing the proposed project over the alternatives.

§ 9.4.16 Cluster/Conservation Design Development

A. Information identifying all ARAs, Highlands resources and associated Resource Areas, as defined in the Agricultural Resources Protection and Cluster/Conservation Design Development provisions of this Ordinance where applicable, the environmental resources defined and covered under NJDEP Preservation Area rules at N.J.A.C. 7:38.

B. Information identifying soil quality on the project site, including Prime, Statewide, Unique, and Locally Important farmland soils, for projects located within an ARA.

C. Identification of any preserved land or land targeted for preservation (agriculture and open space) affecting parcels any portion of which is within 200 feet of the project site.

D. Plans showing all on-site Highlands resources and Resource Areas including ARAs, based on adopted maps in the ERI and the Master Plan and where applicable, the environmental resources defined and covered under NJDEP Preservation Area rules at N.J.A.C. 7:38.

E. Plans showing the cluster/conservation design development project area, including but not limited to, the area set aside for preservation, the area set aside for development, buffer areas, setbacks and

DRAFT FOR MUNICIPAL REVIEW

-115-
recreational trails, as applicable. Plans delineating public spaces, landscaping including street tree planting areas, and vehicular access and integration with available modes of transportation, including pedestrian, bicycle, motor vehicle, rail or mass transit.

F. A stormwater management plan delineating Low Impact Development techniques, and information regarding steps taken to achieve integration or stormwater management designs with public spaces, existing and proposed landscape features, and buffers.

G. Narrative and mapped description of the extent to which the application is consistent with the Cluster/Conservation Design provisions of this Ordinance.

§ 9.4.17 Low Impact Development

A. Description of green design techniques (including those techniques supported by the U.S. Green Building Council through its Leadership in Energy and Environmental Design program) considered and incorporated into plan layout. Indicate methods for re-use and recycling of building materials when development involves demolition.

B. Plans showing the proposed landscape plan, showing incorporation of native, drought-tolerant, disease-resistant plant species and exclusion of invasive plant species.

C. Plans showing the proposed areas of dedicated open space and the conservation easements or other protection measures to be imposed through the development approval. Depict the extent of compliance with the goal of 50% open space in accordance with the Low Impact Development Program provisions of this Ordinance and smart growth principles.

D. Narrative description of the extent to which the application is consistent with the Low Impact Development provisions of this Ordinance and smart growth principles.

E. In addition to the architectural elevation renderings required above, provide descriptions and illustrations of the energy and water efficiency measures developed for proposed buildings. Detail siting of structures based on microclimate considerations. Describe microclimate conditions (i.e., sun exposure, prevailing winds) affecting the project site and the extent to which they have been (or will be) considered in the design, orientation and lay-out of proposed buildings to optimize energy efficiency.
ARTICLE 10. APPEALS, WAIVERS, EXCEPTIONS

§ 10.1 APPEALS

[SECTION UNDER CONSTRUCTION]

§ 10.2 WAIVERS AND EXCEPTIONS
Waivers or exceptions may be granted only in cases where the review standards of this section have been satisfied.

§ 10.2.1 Highlands Act Waiver Provisions
For applications other than major Highlands developments in the Preservation Area, and for any applicable approval in the Planning Area, no development involving a waiver may be approved by the development review board for disturbance of environmental, geological, water or resource features of the property that are regulated under this Ordinance unless the applicant has received approval by the Highlands Council of a Highlands Act Waiver under the RMP pursuant to the Highlands Project Review Procedures.

§ 10.2.2 Exception Provisions

A. For applications other than major Highlands developments in the Preservation Area, exceptions may be approved by the development review board for disturbance of environmental, geological, water or resource features of the property that are regulated under this Ordinance only where the applicant can demonstrate that:

1. The deviation is unavoidable and represents the minimum feasible under the particular circumstances surrounding the project proposal, and the grant of relief is reasonable, necessary and supports the general purpose and intent of the applicable development regulations; or

2. The literal enforcement of the provision(s) of the ordinance at issue is impracticable or will exact undue hardship because of peculiar conditions pertaining to the land in question.

B. The approval of an exception must be accompanied by a detailed justification, and is subject to review by the Highlands Council. The justification must include at a minimum an explanation of how and to what extent the following conditions are addressed:

1. No alternative exists that will allow for at least a minimum practical use of the property;

2. The exception is for road or utility access to another part of the site where the actual development would occur (if applicable);

3. The exception provides relief only to the minimum extent necessary; and

4. Other environmental features are not damaged in the process of protecting the regulated resources.

§ 10.2.3 Additional Provisions
No exception may be approved that violates the NJ Erosion Control Standards at N.J.A.C. 2:90-1.

DRAFT FOR MUNICIPAL REVIEW

-117-
ARTICLE 11. ENFORCEMENT, VIOLATIONS, PENALTIES

§ 11.1 ENFORCEMENT

Enforcement of the provisions of this Ordinance shall be the responsibility of the Borough/Township/Town Zoning Officer, Engineer, Health Department, Construction Code Official and any other officer designated by the Borough/Township/Town Administrator, Manager, or Governing Body, as applicable. Enforcement shall occur in the case of any activity, improvement, or development project that violates any provision of this Ordinance, whether or not subject to a permitting or approval process pursuant to this Ordinance, or the underlying municipal land use ordinances.

§ 11.2 INSPECTIONS

A. Site Inspections. The Zoning Officer, Construction Official and Borough Engineer are authorized to and shall periodically inspect all project sites for compliance with development approvals pursuant to this Ordinance. The Inspector shall in addition:

1. Verify of baseline conditions in all areas designated for conservation easements, deed restrictions or other means of resource preservation.

2. Sequence compliance inspections to ensure the protection of on-site and off-site resources, achievement of site construction and environmental impact requirements, placement of conservation easement monuments, etc.

3. Verification “as built” conditions to ensure compliance with conservation easements, deed restrictions or other required means of resource preservation.

§ 11.3 ADMINISTRATIVE COMPLIANCE

The Zoning Officer and Construction Official are herein shall be authorized to issue a stop-work order, revoke building permits, refuse to approve further work, or deny certificates of occupancy, and to impose mandatory remedial and corrective measures including full restoration of any resources that are improperly disturbed.

§ 11.4 PENALTIES

Civil and criminal penalties for violations of this Ordinance shall be as established in accordance with [specify municipal code for penalty provisions].
APPENDIX A. FOREST DETERMINATION

For purposes of this Ordinance, the determination of whether a wooded area constitutes a forest, shall rely upon the Highlands Council procedures set forth herein, as adapted from NJDEP Preservation Area Rules (at N.J.A.C. 7:38-3.9). These standards shall apply to the entirety of the Highlands Area whether inclusive solely of Preservation Area, Planning Area, or any combination of the two.

A. The applicant shall identify on a site plan all forest in existence on the lot as of August 10, 2004 as well as those forest areas that have subsequently developed. An upland forest area shall be determined in accordance with the following method:

1. The limit of the forest shall be identified using aerial photographs obtained from the NJDEP, free of charge, at www.state.nj.us/dep/gis/; and

2. If the aerial photograph contains areas of sporadic coverage that have not been identified as forest by the applicant, the applicant shall lay a one-half acre grid system over the photograph. A standard 142 square foot grid block shall be used, as provided by the NJDEP at its website. Any grid block containing 33 percent or greater forest cover shall be considered as forest, unless the applicant demonstrates otherwise using the procedure established in B., below.

3. If the applicant has an approved forest management plan identifying forest on a site, the limits of the forest indicated in the plan may be submitted as an additional resource, but shall not be used in lieu of aerial photographs.

B. Alternatively, a forest determination may be made based upon the size and density of trees on the subject property, in accordance with the following method:

1. Select two 25-foot by 25-foot plots in every acre of the site potentially containing a forest.
   a) The plots shall be located in the portion of each acre having the highest density of trees as determined by a visual inspection.
   b) If the tree size and density are very uniform over some or the entirety of the site, one plot may be selected in the area of uniformity. However, the point total from the one plot shall be doubled to determine the total point value for the sampled acre pursuant to B.5., below.

2. In each plot, measure the diameter of each tree at four and one-half feet above ground (diameter at breast height, dbh).

3. Score each tree as follows:

<table>
<thead>
<tr>
<th>Diameter of Tree (dbh)</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 inch to 3 inches</td>
<td>2</td>
</tr>
<tr>
<td>Between 3 and 7 inches</td>
<td>4</td>
</tr>
<tr>
<td>7 inches to 12 inches</td>
<td>6</td>
</tr>
<tr>
<td>Greater than 12 inches</td>
<td>8</td>
</tr>
</tbody>
</table>

4. Add together the scores for all of the trees in each plot.
5. If the total score for both plots is equal to or greater than 16, the sampled acre is regulated as a forest. For example, if the two 25-foot by 25-foot plots contain a total of three trees which are two inches in diameter, two trees which are six inches in diameter, and one tree which is 15 inches in diameter, the score for the sampled area would be: \((3 \times 2) + (2 \times 4) + (1 \times 8) = 22\), and the sampled acre is considered a forest.

6. If a sampled acre is a forest, the applicant shall assume that a half-acre of ground surrounding all sides of the sampled acre is also forest except for the surrounding areas that are sampled by the applicant and score under 16. In that case, a sufficient number of plots in the surrounding area shall be sampled by the applicant to delineate the forest portion of the surrounding area.

7. The applicant shall submit the results of field sampling data provided in B.1 through B.6 above. The outer perimeter of all sample plots shall be flagged in the field and their locations shown on a plan.

8. For a newly planted or regenerating forest, an area shall be considered forest if there are 408 seedlings or saplings per sampled acre, that is, the total number of seedlings or saplings in the two sample plots is 12 or more. For the purposes of this section, a tree will be considered a seedling or sapling if it is has a caliper (diameter) of less than one (1) inch.

9. Agricultural and/or horticultural uses such as orchards, tree farms and nurseries are not considered forest under this section.

C. The limit of the forest shall be the outermost edge of the canopy of the forest area identified in A. through B., above.
APPENDIX B. MAJOR POTENTIAL CONTAMINANT SOURCES

Land uses and activities determined by the Highlands Council (based on New Jersey Safe Drinking Water Act regulations at N.J.A.C. 7:10 and NJDEP regulations) to be Major Potential Contaminant Sources include the following:

1. Permanent storage or disposal of hazardous wastes, industrial or municipal sludge or radioactive materials, including solid waste landfills.
2. Collection and transfer facilities for hazardous wastes, solid wastes that contain hazardous materials, and radioactive materials.
3. Any use or activity requiring the underground storage of a hazardous substance or waste in excess of an aggregate total of 50 gallons.
5. Above-ground storage facility for a hazardous substance or waste with a cumulative capacity greater than 2,000 gallons.
6. Any industrial treatment facility lagoon.
7. Any facility with a SIC Code number included under the New Jersey Safe Drinking Water Act Regulations at N.J.A.C. 7:10A-1.14, Table II(N)A, with a toxicity number of II or greater. (See APPENDIX D.)
8. Automotive service center (repair & maintenance).
10. Dry cleaning processing facility.
11. Road salt storage facility.
12. Cemetery.
14. Truck, bus, locomotive maintenance yard.
15. Site for storage and maintenance of heavy construction equipment and materials.
16. Site for storage and maintenance of equipment and materials for landscaping.
17. Livestock operation containing 300 or more Animal Units (AU) [1 AU = 1000 pounds of live animal weight] as defined by the NJ Department of Agriculture in its Criteria and Standards for Animal Waste Management, at NJAC 2:91.
18. Quarrying and/or mining facility.
19. Asphalt and/or concrete manufacturing facility.
21. Residential or agricultural motor fuel in NJDEP exempted underground storage tanks (i.e., under 1,000 gallons).

DRAFT FOR MUNICIPAL REVIEW

-121-
APPENDIX C. MINOR POTENTIAL CONTAMINANT SOURCES

Land uses and activities determined by the Highlands Council (based on New Jersey Safe Drinking Water Act regulations at N.J.A.C. 7:10 and NJDEP regulations) to be Minor Potential Contaminant Sources include the following:

1. Underground storage of hazardous substance or waste of less than 50 gallons.
2. Underground heating oil storage tank with a capacity of less than 2,000 gallons.
3. Sewage treatment facility regulated by a NJPDES permit granted under NJAC 7:14A.
4. Sanitary sewer system, including sewer line, manhole, or pump station.
5. Industrial waste line.
7. Facility requiring a groundwater discharge permit issued by the NJDEP pursuant to N.J.A.C 7:14A et seq.
8. Stormwater retention-recharge basin.
9. Dry well.
10. Storm water conveyance line.
12. Agricultural chemical bulk storage and mixing or loading facility including crop dusting facilities.
13. Above-ground storage of hazardous substance or waste in quantities of less than 2,000 gallons.
14. Livestock operation containing 8 or more Animal Units (AU) [1 AU = 1,000 pounds of live animal weight] or those receiving 142 or more tons of animal waste per year as defined by the NJ Department of Agriculture pursuant to its Criteria and Standards for Animal Waste Management, at NJAC 2:91.
15. Other PCS’s of similar nature that are not listed in (1) through (14) above or in the definition of Major PCS.
## Facilities with Toxicity Ratings of II or Greater

N.J.A.C. 7:10A-1.14(c)4, Table II(N)A

<table>
<thead>
<tr>
<th>SIC Code for Industrial Facility*</th>
<th>Description of Industrial Facility which includes activities that may release hazardous substances</th>
<th>Toxicity Rating</th>
</tr>
</thead>
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<tr>
<td>Any SIC Code</td>
<td>All ground water remediation of toxic substances, including priority pollutants</td>
<td>V</td>
</tr>
<tr>
<td>Any SIC Code</td>
<td>Contaminated storm water runoff from any type of facility listed below</td>
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</tr>
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<td>0721</td>
<td>Crop dusting and spraying</td>
<td>IV</td>
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<td>Metal mining</td>
<td>V</td>
</tr>
<tr>
<td>12xx</td>
<td>Coal mining</td>
<td>III</td>
</tr>
<tr>
<td>1475</td>
<td>Phosphate rock mining</td>
<td>IV</td>
</tr>
<tr>
<td>22xx</td>
<td>Textile mills with finishing operations (dyeing, coating, etc.)</td>
<td>V</td>
</tr>
<tr>
<td>2491</td>
<td>Wood preserving</td>
<td>V</td>
</tr>
<tr>
<td>2493</td>
<td>Reconstituted wood products</td>
<td>V</td>
</tr>
<tr>
<td>25xx</td>
<td>Furniture &amp; fixtures with metal finishing</td>
<td>V</td>
</tr>
<tr>
<td>261x, 262x, 263x</td>
<td>Pulp, paper, and paperboard mills</td>
<td>V</td>
</tr>
<tr>
<td>27xx</td>
<td>Printing &amp; publishing</td>
<td>II</td>
</tr>
<tr>
<td>2812</td>
<td>Inorganic chemicals, alkalies &amp; chlorine</td>
<td>V</td>
</tr>
<tr>
<td>2813</td>
<td>Industrial inorganic chemicals</td>
<td>II</td>
</tr>
<tr>
<td>2816</td>
<td>Inorganic pigments</td>
<td>IV</td>
</tr>
<tr>
<td>2819</td>
<td>Industrial inorganic chemicals</td>
<td>IV</td>
</tr>
<tr>
<td>282x</td>
<td>Plastic materials &amp; synthetic resins</td>
<td>V</td>
</tr>
<tr>
<td>283x</td>
<td>Drugs</td>
<td>V</td>
</tr>
<tr>
<td>284x</td>
<td>Soaps, detergents, etc.</td>
<td>III</td>
</tr>
<tr>
<td>285x</td>
<td>Paints, etc.</td>
<td>IV</td>
</tr>
<tr>
<td>2861</td>
<td>Gum &amp; wood chemicals</td>
<td>III</td>
</tr>
<tr>
<td>2865, 2869</td>
<td>Industrial organic chemicals</td>
<td>VI</td>
</tr>
<tr>
<td>2879</td>
<td>Pesticides &amp; agricultural chemicals</td>
<td>VI</td>
</tr>
<tr>
<td>289x, except 2891</td>
<td>Miscellaneous chemical products</td>
<td>IV</td>
</tr>
<tr>
<td>2891</td>
<td>Adhesives &amp; sealants</td>
<td>V</td>
</tr>
<tr>
<td>29xx</td>
<td>Petroleum refining</td>
<td>V</td>
</tr>
<tr>
<td>30xx</td>
<td>Rubber &amp; plastic products</td>
<td>IV</td>
</tr>
<tr>
<td>3111</td>
<td>Leather tanning &amp; finishing</td>
<td>IV</td>
</tr>
<tr>
<td>331x, except 3313</td>
<td>Steel mills</td>
<td>VI</td>
</tr>
<tr>
<td>3313</td>
<td>Electrometallurgical products, except steel</td>
<td>III</td>
</tr>
<tr>
<td>332x</td>
<td>Iron &amp; steel foundries</td>
<td>V</td>
</tr>
<tr>
<td>333x</td>
<td>Primary smelting, nonferrous metals</td>
<td>VI</td>
</tr>
<tr>
<td>334x</td>
<td>Secondary smelting, nonferrous metals</td>
<td>V</td>
</tr>
<tr>
<td>335x</td>
<td>Rolling, drawing, extruding, nonferrous metals</td>
<td>V</td>
</tr>
<tr>
<td>336x</td>
<td>Nonferrous foundries</td>
<td>V</td>
</tr>
<tr>
<td>339x</td>
<td>Miscellaneous primary metals products</td>
<td>V</td>
</tr>
<tr>
<td>341x, 342x, 343x, 344x,</td>
<td>Fabricated metal products, with metal finishing</td>
<td>V</td>
</tr>
<tr>
<td>345x, 346x, except</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3431 &amp; 3463</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*SIC (Standard Industrial Classification) Codes are determined from the Federal Manual (1987) issued by the United States Office of Management and Budget.
SIC Code for Industrial Facility* | Description of Industrial Facility which includes activities that may release hazardous substances | Toxicity Rating
--- | --- | ---
3431 | Enameled sanitary ware, cast iron basis | VI
3463 | Nonferrous forgings | V
347x | Plating & coating | V
348x | Ordinance, with metal finishing | V
348x | Ordinance, explosive load, assembly, packing | IV
349x, except 3497 | Miscellaneous fabricated metal products, with metal finishing | V
3497 | Metal foil & leaf | V
35xx | Industrial/commercial machinery & equipment, with metal finishing | V
366x | Electronic equipment, with metal finishing or porcelain enameling | V
3624 | Carbon & graphite products | V
3671 | Cathode ray tubes | V
3672 | Printed circuit boards | V
3674 | Semiconductors | VI
3679 | Electronic crystals only | III
3691, 3692 | Batteries | IV
37xx, except 3731 | Transportation equipment, with metal finishing | V
3731 | Ship building | IV
38xx | Measuring, analyzing & controlling instruments, with metal finishing | V
3844, 3845 | Measuring, analyzing & controlling instruments, with electron tube manufacture | V
3861 | Photographic related chemicals | V
39xx | Miscellaneous manufacturing industries, with metal finishing | V
4231 | Trucking terminals | III
4493 | Marinas | III
4499 | Water transportation services | III
46xx | Pipelines, except natural gas | V
4911, 4931 | Electric services | IV
4941 | Water supply | IV
4953 | Solid waste facilities | IV
4953 | Hazardous waste treatment facilities | VI
5052 | Coal & other minerals & ores | V
5093 | Scrap & waste materials | VI
5169 | Chemicals & allied products | VI
5171 | Petroleum bulk stations & terminals | V
5191 | Farm supplies | IV
7211, 7215, 7216 & 7217 | Laundries, dry-cleaning & carpet/upholstery cleaning | II
7213, 7218 | Linen supply & industrial launderers | IV
7342 | Disinfecting & pest control services | VI
7389 | Solvents recovery services only | VI
7542 | Car & truck washes | II
7699 | Repair shops, with metal finishing | V
8062 | General medical & surgical hospitals | VI
8069 | Specialty hospitals | VI
8071 | Medical laboratories | VI
8731 | Commercial research organizations | IV
8733 | Non-commercial research organizations | IV

*SIC (Standard Industrial Classification) Codes are determined from the Federal Manual (1987) issued by the United States Office of Management and Budget.
APPENDIX E. HIGHLANDS ACT PROVISIONS ON AGRICULTURE/HORTICULTURE

Provisions of the Highlands Act regarding agricultural and horticultural development apply only to such development in the Preservation Area where it results in specified increases in agricultural impervious cover, as provided at N.J.S.A. 13:20-29, below.

C.13:20-29 Agricultural, horticultural development, review required; enforcement.

31. a. (1) Any agricultural or horticultural development in the preservation area that would result in the increase, after the date of enactment of this act either individually or cumulatively, of agricultural impervious cover by three percent or more of the total land area of a farm management unit in the preservation area shall require the review and approval by the local Soil Conservation District of a Farm Conservation Plan which shall be prepared and submitted by the owner or operator of the farm management unit. Upon approval of the Farm Conservation Plan by the local Soil Conservation District, the owner or operator of the farm management unit shall implement the plan on the farm management unit. The local Soil Conservation District shall transmit a copy of an approved Farm Conservation Plan to the State Soil Conservation Committee, and, if any part of the farm management unit is preserved under any farmland preservation program, to the State Agriculture Development Committee.

(2) Any agricultural or horticultural development in the preservation area that would result in the increase, after the date of enactment of this act either individually or cumulatively, of agricultural impervious cover by nine percent or more of the total land area of a farm management unit in the preservation area shall require the review and approval by the local Soil Conservation District of a resource management systems plan which shall be prepared and submitted by the owner or operator of the farm management unit.

Prior to the approval of a resource management systems plan by a local Soil Conservation District, a copy of the resource management systems plan shall be forwarded by the local Soil Conservation District to the Department of Environmental Protection for review and approval, with or without conditions, or denial within 60 days after receipt by the department. Upon approval of the resource management systems plan by the local Soil Conservation District and the Department of Environmental Protection, the owner or operator of the farm management unit shall implement the plan on the farm management unit. The local Soil Conservation District shall transmit a copy of an approved resource management systems plan to the State Soil Conservation Committee, and, if any part of the farm management unit is preserved under any farmland preservation program, to the State Agriculture Development Committee.

(3) A Farm Conservation Plan required pursuant to paragraph (1) of this subsection and a resource management systems plan required pursuant to paragraph (2) of this subsection shall be prepared in accordance with science-based standards, consistent with the goals and purposes of this act, which standards shall be established by the State Board of Agriculture and the Department of Agriculture, in consultation with the Department of Environmental Protection, the State Agriculture Development Committee, Rutgers Cooperative Extension, and the Natural Resources Conservation Service in the United States Department of Agriculture. Within 270 days after the date of enactment of this act, the State Department of Agriculture, in consultation with the Department of Environmental Protection, shall develop and adopt, pursuant to the “Administrative Procedure Act,” P.L.1968, c.410 (C.52:14B-1 et seq.), these standards and any other rules and regulations necessary to implement this section.

b. (1) If any person violates any provision of subsection a. of this section, any rule or regulation adopted pursuant to subsection a. of this section, or a Farm Conservation Plan or a resource management systems plan approved pursuant to subsection a. of this section, the Department of Agriculture or the local Soil Conservation District may seek a penalty, an injunction, or other equitable relief in a court of competent jurisdiction.
Conservation District may institute a civil action in the Superior Court for injunctive relief to prohibit and prevent the violation or violations and the court may proceed in a summary manner.

(2) (a) Any person who violates any provision of subsection a. of this section, any rule or regulation adopted pursuant to subsection a. of this section, or a Farm Conservation Plan or a resource management systems plan approved pursuant to subsection a. of this section shall be liable to a civil administrative penalty of up to $5,000 for each violation. If the violation is of a continuing nature, each day during which it continues shall constitute an additional, separate, and distinct offense. No assessment shall be levied pursuant to this subsection until after the party has been notified by certified mail or personal service and provided an opportunity for a hearing.

(b) Any amount assessed under this subsection shall fall within a range established in a penalty schedule adopted by the Department of Agriculture pursuant to the “Administrative Procedure Act,” which shall take into account the seriousness and duration of the violation and whether the violation involves the failure to prepare or to implement a Farm Conservation Plan or resource management systems plan. The schedule shall also provide for an enhanced penalty if the violation causes an impairment to water quality. Any civil administrative penalty assessed under this subsection may be compromised by the Secretary of Agriculture upon the posting of a performance bond by the violator, or upon such terms and conditions as the secretary may establish by regulation.

(c) Any person who fails to pay a civil administrative penalty in full pursuant to this subsection shall be subject, upon order of a court, to a civil penalty of up to $5,000 for each violation. If the violation is of a continuing nature, each day during which it continues shall constitute an additional, separate, and distinct offense. Any such civil penalty imposed may be collected with costs in a summary proceeding pursuant to the “Penalty Enforcement Law of 1999,” P.L.1999, c.274 (C.2A:58-10 et seq.). The Superior Court and the municipal court shall have jurisdiction to enforce the provisions of the “Penalty Enforcement Law of 1999” in connection with this subsection.

(d) All penalties collected pursuant to this subsection shall either be used, as determined by the council, by the State Agriculture Development Committee for the preservation of farmland in the preservation area or by any development transfer bank used or established by the council to purchase development potential in the preservation area.

c. Nothing in this act, the regional master plan, any rules or regulations adopted by the Department of Environmental Protection pursuant to this act, or any amendments to a master plan, development regulations, or other regulations adopted by a local government unit to specifically conform them with the regional master plan shall be construed to alter or compromise the goals, purposes, policies, and provisions of, or lessen the protections afforded to farmers by, the “Right to Farm Act,” P.L.1983, c.31 (C.4:1C-1 et seq.), and any rules or regulations adopted pursuant thereto.

d. The provisions of this section shall not be construed to alter or obviate the requirements of any other applicable State or local laws, rules, regulations, development regulations, or ordinances.
APPENDIX F.   NJDA HIGHLANDS AGRICULTURAL REGULATIONS


§ 2:92-3.1 Farm Conservation Plan requirements

(a) Agricultural or horticultural development that results, individually or cumulatively, in at least three percent but less than nine percent increase in new agricultural impervious cover to the total land area of the Farm Management Unit since enactment of the Highlands Act (August 10, 2004) requires the development and implementation of a Farm Conservation Plan approved in accordance with this section.

1. Prior to any development activity, the owner or operator of a farm management unit or his agent shall develop a farm conservation plan with the assistance of the NRCS, TSP or an appropriate agent in conformance with Sections III and IV of the June 1, 2005 NRCS NJ-FOTG, as amended and supplemented, which is hereby adopted and incorporated by reference.

   i. Copies of the NJ-FOTG are available from the NRCS Field Offices and the State Office at 220 Davidson Ave, 4th Floor, Somerset, NJ 08873.


   iii. A copy of this document is on file in the NJDA office of the Director, Division of Agricultural and Natural Resources, P.O. Box 330, Trenton, NJ 08625.

2. The following shall be contained in the Farm Conservation Plan submitted for approval:

   i. The name, address, block(s) and lot(s) of the operation and the name and telephone number of the emergency contact;

   ii. The owner or operator's name, signature and date;

   iii. A soil map;

   iv. An aerial photograph or diagram of the field;

   v. Identification of soil, water and animal resources, specifically, threatened and endangered species;

   vi. A list of conservation practices to be implemented;

   vii. The location and schedule for applying new practices;

   viii. Records of plan implementation activities;

   ix. A plan for operation and maintenance; and

   x. Any other site-specific information necessary for plan certification.

3. The Farm Conservation Plan shall be reviewed, and if appropriate, approved by the local Soil Conservation District. Plans developed in consultation with entities other than the NRCS or TSP must be reviewed by NRCS for approval prior to submission to the local Soil Conservation District for review.

4. The local Soil Conservation District shall transmit a copy of the approved plan to the State Soil Conservation Committee. If any part of the Farm Management Unit is preserved under any farmland
preservation program, the local Soil Conservation District shall also transmit a copy of the plan to the State Agriculture Development Committee.

5. The local Soil Conservation District shall approve the Farm Conservation Plan if it finds that the plan meets the NJ-FOTG Quality Criteria (Section III) and Practice Standards (Section IV) for soil, water and animal resource concerns, specifically threatened and endangered species.

6. The Farm Conservation Plan shall be executed in accordance with the implementation schedule contained in the approved plan.

7. Anyone aggrieved by a decision of the Soil Conservation District shall have an opportunity to appeal in accordance with 2:90-1.6.

8. Anyone who is aggrieved by the determination made in accordance with (a)7 above shall, upon written request transmitted to the Department within 20 days of that determination, be afforded the opportunity for a hearing thereon in the manner provided for contested cases pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq. and the Uniform Administrative Procedure Rules, 1:1.

   i. Requests for hearings shall be sent to the Director, Division of Agriculture and Natural Resources, N.J. Department of Agriculture, PO Box 330, Trenton, New Jersey 08625-0330.

§ 2:92-4.1 Resource Management System Plan requirements

(a) Agricultural or horticultural development that results, individually or cumulatively, in at least nine percent or more of new agricultural impervious cover to the total land area of the Farm Management Unit since enactment of the Highlands Act (August 10, 2004) requires the development and implementation of a Resource Management System Plan in accordance with this section.

1. Prior to any development activity, the owner or operator of a farm management unit or his agent shall develop a Resource Management System Plan with the assistance of the NRCS, TSP or appropriate agent in conformance with the June 1, 2005 NRCS NJ-FOTG, as amended and supplemented, which is hereby adopted and incorporated by reference.

   i. Copies of the NJ-FOTG are available from the NRCS Field Offices and the State Office at 220 Davidson Ave, 4th Floor, Somerset, NJ 08873.


   iii. A copy of this document is on file in the NJDA office of the Director, Division of Agricultural and Natural Resources, P.O. Box 330, Trenton, NJ 08625.

2. The following shall be contained in the RMS plan submitted for approval:

   i. The name, address, block(s) and lot(s) of the operation and the name and telephone number of the emergency contact;

   ii. The owner or operator's name, signature and date;

   iii. A soil map;

   iv. An aerial photograph or diagram of the field;

DRAFT FOR MUNICIPAL REVIEW

-128-
v. Identification of soil, water, air, plant and animal resources including endangered and threatened species;

vi. A list of conservation practices to be implemented;

vii. The location and schedule for applying new practices;

viii. Records of plan implementation activities;

ix. A plan for operation and maintenance; and

x. Any other site-specific information necessary for plan certification.

3. Upon receipt and prior to approval, the local Soil Conservation District will transmit a copy of the Resource Management System Plan to the DEP, who must review and approve it with or without conditions or deny it within 60 days of receipt.

4. The Resource Management System Plan shall be reviewed, and if appropriate, approved by the local Soil Conservation District. Plans developed by entities other than the NRCS or TSP must be reviewed by NRCS for approval prior to submission to the local Soil Conservation District for review.

5. The local Soil Conservation District shall transmit a copy of the approved plan to the State Soil Conservation Committee. If any part of the Farm Management Unit is preserved under any farmland preservation program, the local Soil Conservation District shall also transmit a copy of the plan to the State Agriculture Development Committee.

6. The local Soil Conservation District shall approve the RMS plan if it finds that it meets the NJFOTG Quality Criteria and Standards for soil, water, air, plants and animal resources.

7. The Resource Management System Plan shall be executed in accordance with the implementation schedule contained in the approved plan.

8. Anyone aggrieved by a decision of the local Soil Conservation District shall have an opportunity to appeal in accordance with 2:90-1.6.

9. Anyone who is aggrieved by the determination made in accordance with (a)8 above shall, upon written request transmitted to the Department within 20 days of the determination, be afforded the opportunity for a hearing thereon in the manner provided for contested cases pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq. and the Uniform Administrative Procedure Rules, 1:1.

i. Requests for hearings shall be sent to Director, Division of Agriculture and Natural Resources, N.J. Department of Agriculture, PO Box 330, Trenton, New Jersey 08362-0330.
APPENDIX G. EXHIBITS

Exhibit 1. Borough/Township/Town Highlands Area
Exhibit 2. Highlands Zones and Sub-Zones
Exhibit 3. Forest Resource Area
Exhibit 4. Highlands Open Waters
Exhibit 5. Highlands Riparian Areas
Exhibit 6. Steep Slope Protection Area
Exhibit 7. Critical Wildlife Habitat
Exhibit 8. Significant Natural Areas
Exhibit 9. Vernal Pools
Exhibit 10. Carbonate Rock Areas
Exhibit 11. Lake Management Area
Exhibit 12. Prime Ground Water Recharge Areas
Exhibit 13. Wellhead Protection Areas
Exhibit 14. Highlands Special Environmental Zone
Exhibit 15. Agricultural Resource Area
Exhibit 16. Highlands Historic, Cultural and Archaeological Resources
Exhibit 17. Highlands Scenic Resources
Exhibit 18. Net Water Availability by HUC14 Subwatershed
Exhibit 19. Public Community Water Systems Map
Exhibit 20. Highlands Domestic Sewerage Facilities Map
Exhibit 21. Septic System Yield Map
Exhibit 22. Total Forest Area
Exhibit 23. Forest Subwatersheds
Exhibit 24. Watershed Values
Exhibit 25. Riparian Integrity