The Natchaug Pre-Development Review Checklist and Natchaug Low Impact Development (LID) Guidance documents in this packet were designed to be used in the early development planning phase by land use change applicants. The intended purposes are to:

- **Review** subdivision and commercial development plans for compatibility with the 2020 Natchaug Healthy Watershed Projection Plan;
- **Guide** the applicant on the best means to reduce impacts from stormwater runoff;
- **Maintain** the natural hydrology of the development site with engineering design and on-site Low Impact Development or green infrastructure\(^1\) practices;
- **Assure** the final development plans are compatible with the Connecticut Public Health Codes for development upstream of a surface water drinking water supply intake; and
- **Help sustain** the recognition of the greater Natchaug watershed as a healthy watershed with statewide priority for protection.

The Checklist was designed by the Eastern Connecticut Conservation District to facilitate early identification of important water and other natural resources on a property that may be impacted by development, and to promote measures to appropriately protect those resources. Applicants are strongly encouraged to consider these resources and measures during the initial planning and design phase of the application process.

Applicants are also encouraged to meet with their local Conservation and/or Planning Commissions or Town Planner early in the site development planning phase, to review natural resources on the proposed development site and discuss conservation priorities and measures. Experience has shown that such pre-application reviews help identify critical resources, prioritize conservation goals, and avoid conflicts, while protecting the rights of applicants and property owners.

A copy of the Natchaug Healthy Watershed Protection Plan is available from the Eastern Connecticut Conservation District on request. Please call 860-319-8806 to obtain an electronic copy.

Sincerely,

Town Representative (TBD) (Planner, Zoning Chair, IWC Chair) Eastern Connecticut Conservation District Dan Mullins, Executive Director

\(^1\) Section 502 of the Clean Water Act defines green infrastructure as "...the range of measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, stormwater harvest and reuse, or landscaping to store, infiltrate, or evapotranspirate stormwater and reduce flows to sewer systems or to surface waters."

The Natchaug Healthy Watershed Protection Plan was funded in part by the CT Department of Energy and Environmental Protection with a US EPA Clean Water Act §319 Non-Point Source Grant.
Predevelopment Review Checklist for Compatibility with the Natchaug Watershed Protection Plan
To be completed by the applicant prior to developing a site development plan.

This checklist highlights important resources and other information to be considered during the planning phases of a development proposal.

Application # __________________________ Date the Checklist was completed __________________________
Property ID# __________________________ Name of the local watershed the property is located in __________________________
Name of Applicant __________________________ Number of acres __________________________

Please begin the review with an assessment of natural resources on or near the property for which the development proposal is being submitted (Property). Check all boxes that apply and fill in requested information.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Pre-development Site Conditions</th>
<th>Conservation Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water Resources</td>
<td>☐ The development proposal is located in a Class AA drinking water source watershed area.†</td>
<td>• Assure compliance with the Connecticut Public Health Codes for drinking water supply watersheds.</td>
</tr>
<tr>
<td></td>
<td>☐ The development proposal is located in a Class A potential future drinking water source watershed area.‡</td>
<td>• Retain naturally vegetated strips of land along the shoreline as natural filters for multiple types of pollution. Wider vegetated strips (300 feet) function better as pollution filters and help to capture and infiltrate stormwater runoff while also providing for wildlife habitat and corridors.</td>
</tr>
<tr>
<td></td>
<td>☐ The development proposal is not within the Natchaug regional watershed.††</td>
<td>• Avoid developing water access paths in a straight line perpendicular to the slope.</td>
</tr>
<tr>
<td></td>
<td>☐ The property abuts a lake or pond shoreline.</td>
<td>• Avoid development of water access paths in a straight line perpendicular to the slope.</td>
</tr>
<tr>
<td></td>
<td>☐ The property has perennial stream(s) flowing through it.</td>
<td>• Protect vernal pools:</td>
</tr>
<tr>
<td></td>
<td>☐ The property has a perennial stream along the boundary or there is perennial stream within 300 feet of the property boundary on an adjacent property.</td>
<td>o 100-foot undisturbed buffer minimum recommendation</td>
</tr>
<tr>
<td></td>
<td>☐ The property in within a documented cold water stream habitat watershed area*. The name of the stream is __________.</td>
<td>o Minimize disturbance within 750’ of pool edge for critical terrestrial habitat protection.</td>
</tr>
<tr>
<td></td>
<td>☐ The property includes intermittent and ephemeral water courses and/or vernal pools.</td>
<td></td>
</tr>
<tr>
<td>Wetlands and Floodplains</td>
<td>☐ The property includes wetlands*: (% wetlands on the parcel __________________________ %)</td>
<td>• Protect wetland resources from disturbance and/or impacts from hydrologic changes and interconnections.</td>
</tr>
<tr>
<td></td>
<td>☐ The Project area is within the 100-year floodplain‡‡</td>
<td>• Maintain upland vegetated buffers along wetland areas. Wider is better. A recommended width of 300 feet will provide numerous watershed services.</td>
</tr>
<tr>
<td></td>
<td>☐ Is within the 500-year floodplain</td>
<td>• Avoid development in floodplains, especially permanent structures and septic leaching fields.</td>
</tr>
<tr>
<td>Ground Water Resources</td>
<td>☐ The Property is within an Aquifer Projection Area‡‡†</td>
<td>• Protect groundwater quality from impacts from potential contamination from Regulated Activities over important groundwater recharge areas.</td>
</tr>
<tr>
<td></td>
<td>☐ The Property is within a Surficial Aquifer Potential Area.†‡‡†</td>
<td></td>
</tr>
<tr>
<td></td>
<td>☐ The development proposal includes an activity listed as a Regulated Activity*</td>
<td></td>
</tr>
<tr>
<td>Forested Land</td>
<td>☐ _______% predevelopment forested land on the Property Is this forested land included in an area identified as a Core Forest Area*? Circle the correct response. Small  Medium  Large  Not in a core forest block</td>
<td>• Maintain contiguous forest cover for water quality/quantity and wildlife corridors. Forest cover is the natural land cover for most of the watershed area. Properly managed forests contribute the least stormwater runoff and water quality contaminants to stream networks and are important areas for groundwater recharge.</td>
</tr>
<tr>
<td></td>
<td>☐ The Property is adjacent to preserved forest land‡‡†</td>
<td></td>
</tr>
</tbody>
</table>

This checklist was prepared by the Eastern Connecticut Conservation District as part of the Natchaug Healthy Watershed Protection Plan. The Project is funded in part by the CT DEEP from a US EPA Clean Water Act §319 non-point source pollution grant. (Draft 9/18/2020)
<table>
<thead>
<tr>
<th>Resource</th>
<th>Site Conditions</th>
<th>Conservation Considerations</th>
</tr>
</thead>
</table>
| **Biodiversity**      | ☐ What is the Ecological Integrity \textsuperscript{ix} score for this Property? | • Consider the value of the ecological services of nature as you plan your development project.  
• Consider the value of wildlife as part of a healthy watershed.  
• Avoid impacts to species listed as endangered, threatened or of special concern in Connecticut  
• Avoid habitat fragmentation.  
• Look for opportunities to connect preserved land for wildlife linkages.  |
|                       | ☐ High                                                                           |                                                                                                               |
|                       | ☐ Medium                                                                         |                                                                                                               |
|                       | ☐ Low                                                                            |                                                                                                               |
|                       | ☐ The Property includes an area identified as a Natural Diversity Data Base area\textsuperscript{xii}. |                                                                                                               |
|                       | ☐ Is the Property adjacent to existing preserved land?                            |                                                                                                               |
| **Recreational**      | ☐ An existing public use trail crosses the Property.                             | • Consider site-appropriate public access and recreational uses of any land that may be set aside as conservation land.  
• Preserve or create trail systems or linkages.  
• Preserve or create access for recreational fishing where appropriate. |
| **Resources**         | ☐ An existing fisherman’s easement is on the Property.                           |                                                                                                               |
|                       | ☐ The property has potential for boating access.                                 |                                                                                                               |
|                       | ☐ The Property includes abandoned/discontinued town roads, cart paths, logging roads or trails. |                                                                                                               |
| **Soil**              | ☐ Active Agriculture land _____ acres                                           | • The focus on agriculture preservation varies by town.  
• Avoid disturbance of steep slopes.  
• Avoid placing septic systems in soils with poor drainage. |
|                       | ☐ Prime agriculture soil _____ acres                                            |                                                                                                               |
|                       | ☐ Agricultural land of statewide importance _____ acres                           |                                                                                                               |
|                       | ☐ Locally important agricultural soil _____ acres                                |                                                                                                               |
|                       | ☐ Steep slopes (>15%)                                                            |                                                                                                               |
|                       | ☐ Review Soil Suitability for septic systems\textsuperscript{xvi} ranking       |                                                                                                               |
| **Open Space**        | ☐ The Property is along a State of Connecticut Designated Greenway               | • Designate open space to protect or further enhance priority natural resources either under the municipal open space plan.  
• Design preserved land and continuous blocks of open space with minimum perimeter and/or to preserve riparian wildlife corridors or connect Greenways.  
• Cluster new development under the guidance of local Planning or Planning and Zoning regulations.  
• Consider public access to new open space land for passive recreation as appropriate. |
| and Greenways         | ☐ The Property is adjacent to protected or quasi-protected open space.            |                                                                                                               |
|                       | ☐ The Property has a potential to link other open space as a connecting corridor. |                                                                                                               |
|                       | ☐ ______% or Property that would become committed open space under local regulations = _____ acres |                                                                                                               |
|                       | ☐ New open space would be accessible to the public? Yes or no.                    |                                                                                                               |

Using online Geographical Information System (GIS) maps for natural resource information disclaimer: the natural resource data available through the online mapping services are for planning purposes only. Tax parcel outlines are subject to change and may not be current. Open space information may not be current. Each parcel should be further reviewed on the ground to confirm the onsite conditions.

Official Municipal GIS Sources:
If your project is located in the towns of Ashford, Eastford, Union and Woodstock, basic natural resource information with a parcel outline overlay is available at the Northeastern Connecticut Council of Governments (NECCOG) GIS viewer at this link. [http://neccog.org/gis/](http://neccog.org/gis/).

If your project is located in Chaplin, the basic natural resource information with a parcel outline overlay is available at [http://www.mainstreetmaps.com/ct/chaplin/public.asp](http://www.mainstreetmaps.com/ct/chaplin/public.asp).

This checklist was prepared by the Eastern Connecticut Conservation District as part of the Natchaug Healthy Watershed Protection Plan. The Project is funded in part by the CT DEEP from a US EPA Clean Water Act §319 non-point source pollution grant. (Draft 9/18/2020)
If your project is located in Mansfield, the basic natural resource information with a parcel out line overlay is available at this link.

If your project is located in Willington, the basic natural resource information with a parcel out line overlay is available at

If your project is located in Windham, the basic natural resource information with a parcel out line overlay is available at https://seccog.org/gis-viewer.

Endnotes with hyperlinks to free online mapping resources.

---

1 Regulations for Class AA surface water resources upstream of a surface drinking water intake prohibit industrial and sanitary waste water discharges. Additional restrictions and conservation for Class AA watersheds are outlined in the CT Public Health Code Section 19 – 13 – B32 Sanitation of Watersheds
https://eregulations.ct.gov/eRegsPortal/Browse/getDocument?guid=%7BAEA48C63-6D26-46DF-8432-374FCE887875%7D Notification to Windham Water Works is required in the Class AA watershed upstream of their water diversion.

2 Regulations for Class A surface water resource upstream of a potential surface water resource is same as for Class AA except in Class A watersheds, the DEEP Commissioner may authorize certain treated domestic sewage discharged as deemed necessary under specific conditions. See CT Water Quality Standards and Classifications as amended in 2013 for more information. https://portal.ct.gov/-/media/water/water_quality_standards/wsfinaladopted22511pdf.pdf

3 If this project is outside of the Natchaug watershed, the development review checklist does not apply to your project proposal.

4 See: Cold water stream habitat map at https://ctdeepwatermonitoring.github.io/ColdWaterHab/. Each shaded blue area above a red dot indicates the watershed area contributing to the data collected at each red dot. Clicking the red dots will provide the name of the stream. There is no parcel data associated with the Cold Water Habitat online map. Use official town parcel map listed below and local watershed layer to verify if the project is in a cold water stream habitat area. This cold water stream database is periodically updated as more data becomes available.

5 Use the Official Municipal GIS Source map to estimate the presents of wetlands on the parcel. NOTE: A formal application requires a soil scientist to delineate the wetlands on the property. Use of these maps are for planning purposes only and do not replace the need for wetland delineation as required by town regulations.

6 The 100-year and 500-year floodplain data is not available in a digitized format for most communities in the Natchaug watershed. To obtain this information, refer to the paper Flood Insurance Rate Maps (FIRM) produced by the Federal Emergency Management Agency on file at municipal building office.

7 To view CT Aquifer Protection Areas use this link. https://ctdeep.maps.arcgis.com/apps/webappviewer/index.html?id=6b33fc05fcee4c526afa1b2cccbfb

8 Surficial Aquifer Potential Areas are shown on a map created by CT DEEP at https://portal.ct.gov/lib/deep/geology/ctsurficialaquiferpotential.jpg

9 The list of Regulated Activities developed for the Aquifer Protection Program can be found at https://portal.ct.gov/-/media/DEEP/aquifer_protection/municipal_manual/14Appendicespdf.pdf

10 Core Forests/Forest Fragmentation Information: UCONN Connecticut’s Changing Landscape Map View is available at https://uconnclear.maps.arcgis.com/apps/webappviewer/index.html?id=4f4dfb864ff7d4f50a1e5f48d50784c1b&extent=-8341025.0451%2C-46DF-374FCE887875%7D 8432-36DF-8843FCE13F78%7D and is used to estimate different categories of land cover including the forest fragmentation analysis. This data is current to 2015. For determining locations of core forest areas, Click in the upper right hand corner of the screen, then activate the 2015 Forest Fragmentation layer. To interpret the data, click to see the map legend.

11 The Northeast Initiative (draft) mapper project with a parcel overlay is available at https://harvard-cga.maps.arcgis.com/apps/webappviewer/index.html?id=86b899989f567480b311a61eab027b44. Under the words Northeast Initiative in the upper left hand corner of the page, click on icon for Layers List. Click on the down arrow to expand the menu next to MassConnToNLCIwebmap. Check the box for Parcels (must be zoomed to town level) and

This checklist was prepared by the Eastern Connecticut Conservation District as part of the Natchaug Healthy Watershed Protection Plan. The Project is funded in part by the CT DEEP from a US EPA Clean Water Act §319 non-point source pollution grant. (Draft 9/18/2020)
this checklist was prepared by the eastern connecticut conservation district as part of the natchaug healthy watershed protection plan. the project is funded in part by the ct deep from a us epa clean water act §319 non-point source pollution grant. (draft 9/18/2020)

then click the arrow to expand the menu. check the box for parcels_nh_vt_ct_r1. if you are zoomed in, the parcel layer for the town will be visible. this parcel layer will display a shape only and does not include other parcel data. next, activate the protected open space layer. click on the arrow to expand the menu. activate the protected open space (all one color). this map layer is in the process of being expanded to include municipally-owned open space land and may not include a complete data set for protected open space. for other parcel data, compare this map to the official town gis source below listed.

xi ecological integrity is defined as the ability of an area (e.g., local site or landscape) to sustain important ecological functions over the long term. in particular, the functions include the long-term ability to support biodiversity and the ecosystem processes necessary to sustain biodiversity. this data layer is also included in the northeast initiative (draft) mapper project with a parcel overlay at https://harvard-cga.maps.arcgis.com/apps/webappviewer/index.html?id=86b89989f5674809b311a61eab027b44.

under the words northeast initiative in the upper left hand corner of the page, click on icon for layers list. click on the down arrow to expand the menu next to massconn toenlclwebmap. check the box for parcels (must be zoomed to town level) and then click the arrow to expand the menu. check the box for parcels_nh_vt_ct_r1. if you are zoomed in, the parcel layer for the town will be visible. this parcel layer will display a shape only and does not include other parcel data. for other parcel data, compare this map to the official town gis source previously listed. to estimate the index of ecological integrity for the parcel of interest, find tnc forest matrix block 2011 in the layers list. click on the arrow next to the words to expand the menu. scroll down to index of ecological integrity. click on the box to show the data. click the arrow next to the box to show the color scale indicating high, medium and low values. estimate the score for the developed area and record that information on the checklist.

xii the deep updates the natural diversity data base periodically. the most recent data is available using the connecticut environmental conditions online advance viewer. https://cteco.uconn.edu/viewer/index.html?viewer=advanced. in the layers list, check the bioscience box, then expand the menu and select natural diversity database area.

xiii to estimate the suitability of a property for onsite wastewater disposal, use the connecticut environmental conditions online advanced map viewer. https://cteco.uconn.edu/viewer/index.html?viewer=advanced. find the area in the town where your development proposal is located. zoom into that area. click on the soils layer, then press the + sign to expand the soils menu. click the potential for subsurface sewage disposal. use the open space layer/parcels for open space to estimate the location of your development proposal. note: this data is for planning purposes only and will not be a substitute for review and approval by the local health department.
Guidance Document for Low Impact Development  
Best Management Practices for the Natchaug River Watershed

September 18, 2020

Like many rural towns in Connecticut, the towns of Ashford, Eastford, Chaplin, Mansfield, Union, Willington, Windham and Woodstock have seen increased interest in balancing community growth and environmental conservation. When an undeveloped site is converted into residential housing or commercial areas, roads, roofs, parking lots and driveways replace the native vegetation and soils that were on the site. As would be expected, much more water runs off developed sites in response to rain storms. Pollutants, such as oil from vehicles, bacteria, nitrogen and phosphorus collect on the impervious surfaces and are washed off during precipitation events. Typical development approaches do not provide adequate treatment for this stormwater, and receiving waters suffer a variety of impairments due to these human-induced changes in the landscape. Stormwater runoff has been identified as one of the biggest causes of stream and lake quality degradation.

Low impact development (LID) is an approach that will help to minimize the impacts of traditional development, while still allowing for growth. Pioneered in Maryland\(^1\), this approach has been successfully utilized throughout the country. LID has also been adopted as the preferred method of site design in the 2004 Connecticut Stormwater Quality Manual\(^2\) and in 2011 Low Impact Development Appendix to the Connecticut Stormwater Quality Manual\(^3\) and the 2011 Low Impact Development Appendix to Connecticut Guidelines for Soil Erosion and Sediment Control\(^4\). In addition to protecting ecosystems and receiving waters, the LID approach can often result in cost savings on projects\(^3\).

The following areas of focus will help guide planning for your project:

1. **Assessment of natural resources.** Ideally, LID is considered early in the site planning process. The objective is to allow for development of the property, while maintaining the essential hydrologic functions of the site. A thorough assessment of the existing natural resources on the site needs to be performed, so that essential features can be preserved, and suitable sites for development can be identified. Use the Natchaug Predevelopment Review Checklist for Compatibility with the Natchaug Protection Plan for the review the natural resources.

2. **Preservation of open space.** Open space subdivision design can complement the LID approach. Cluster subdivisions provide a key way to protect natural resources while still providing landowners with the ability to develop their property. In most cases, the number

---

\(^1\) This document was originally prepared by Dr. Michael Dietz of the Connecticut Institute of Water Resources for the Town of Mansfield, CT. It has been modified and expanded with permission for use within the Natchaug watershed communities that face similar needs for balancing growth with environmental conservation.

\(^2\) The Natchaug Healthy Watershed Projected was funded in part by the CT Department of Environmental Protection with a US EPA Clean Water Act §319 Non-Point Source Grant.
of residential units allowed in a cluster subdivision equals the number allowed under conventional subdivision regulations.

3. **Minimization of land disturbance.** Once the development envelope is defined, the goal is to minimize the amount of land that needs to be disturbed. Undisturbed forest, meadow, and wetland areas have an enormous ability to infiltrate and process rainfall, providing baseflow to local streams and groundwater recharge. Construction equipment causes severe compaction of soils, so after development, even areas that are thought to be pervious such as grass, can be quite impervious to rainfall.

4. **Reduce and disconnect impervious cover.** With careful planning, the overall percentage of impervious cover in a proposed project can be minimized. Roads, driveways, sidewalks, parking lots, and building footprints can be minimized the reduce impacts, but still provide functionality. Additionally, not all impervious surfaces have the same impact on local waterways. With proper planning, runoff from impervious surfaces can be directed to pervious areas such as grass or forest, or to LID treatment practices. It should be noted that every project is unique, and not every LID practice will be appropriate. For example, sidewalks or bike paths may be an asset to a new subdivision, if there is some connection to existing pedestrian travel routes. However, sidewalks may not be needed in other settings, and would add unnecessary costs and impervious cover. The objective is to evaluate each site individually and determine the most appropriate management techniques to reduce impacts to waterways.

5. **LID practices installed.** There are a variety of practices that can be used to maintain the pre-development hydrologic function of a site. For more detail on the following practices, see the references below:

   - Bioretention areas or rain gardens are depressed areas in the landscape that collect and infiltrate stormwater.
   - Vegetated swales can be used to convey runoff instead of the typical curb and gutter system, and they can also infiltrate and filter stormwater.
   - Water harvesting techniques can be employed, so that stormwater can be a resource rather than a waste product.
   - Pervious pavements allow rainfall to pass through them, and can be installed instead of traditional asphalt or concrete.
   - Green roofs can reduce stormwater runoff through evaporation and transpiration through plants, and they also can help save on heating/cooling costs.

The Natchaug Healthy Watershed Protection Projected was funded in part by the CT Department of Environmental Protection with a US EPA Clean Water Act §319 Non-Point Source Grant.
LID represents a change from typical design approaches. Proper installation and maintenance of LID practices is critical to their performance. Therefore, installation should be performed by someone with LID experience to avoid costly mistakes.

With proper design and installation, LID can provide multiple benefits including decreased construction costs, reduced impacts to receiving waters, increased habitat for wildlife, beautiful landscape features, and increased property values.

6. “Alternative” Lawns Installed. Reducing the size of the area maintained in turf can minimize chores dedicated to yard maintenance, add an alternative aesthetic look to the landscape, and continue to provide multiple environmental benefits (Wallace).

Benefits of an “alternative” lawn:
- Adds ornamental interest.
- Provides a greater diversity of plant species in the home landscape that provide food and other resources for beneficial wildlife.
- Serves to preserve soil moisture, suppress weeds, protect soil from temperature fluctuation, and provide habitat that hosts a variety of beneficial soil organisms.
- Once established, can serve as a perennial ground cover that has the ability to provide cover and prevent soil erosion in areas where turf maintenance may be a challenge, such as steep banks or slopes.
- Native plants used as turf grass alternatives create a change in the character and beauty of the landscape, reflecting a sense of place and providing a variation in aesthetics.

7. Natural vegetation maintained along stream corridors and lake/pond shorelines. By maintaining the natural vegetation along stream corridors and lake/pond shorelines, improved infiltration of stormwater runoff is encouraged, erosion is reduced and habitat for terrestrial and aquatic species is maintained.7

References


The Natchaug Healthy Watershed Protection Projected was funded in part by the CT Department of Environmental Protection with a US EPA Clean Water Act §319 Non-Point Source Grant.
The Natchaug Healthy Watershed Protection Projected was funded in part by the CT Department of Environmental Protection with a US EPA Clean Water Act §319 Non-Point Source Grant.


Natchaug Watershed Low Impact Development (LID)
Site Planning and Design Checklist

Items listed below need to be considered by developers when submitting plans for subdivisions. Due to individual site differences, not all items will apply to each individual property. Check items that have been applied, or explain why the items have not been used. For more information on LID practices and how to implement them please refer to the 2004 Connecticut Stormwater Quality Manual.

1. Assessment of Natural Resources
   - Natural resources and constraints have been identified and are indicated on the plans (wetlands, rivers, streams, flood hazard zones, meadows, agricultural land, tree lines, slopes [identified with 2-foot contours], soil types, exposed ledge & stone walls.
   - Is the property shown on the latest copy of CT DEEP State and Federal Listed Species and Significant Natural Communities Map as listed in the Natural Diversity Data Base (NDDB)? If so, provide a copy of the CT DEEP NDDB request form and CT DEEP reply letter.
   - The property in a cold water stream habitat watershed?
   - Development is designed to avoid critical water courses, wetlands, and steep slopes.
   - Soils suitable for septic & stormwater infiltration have been identified on plans.
   - Soil infiltration rate/permeability has been measured and listed on plan:
     See sheet#_____________________________________________
   - Onsite soils have been assessed to determine suitability for stormwater infiltration.
   - Natural existing drainage patterns have been delineated on the plan and are proposed to be preserved or impacts minimized.

For items not checked, please use the space below to explain why that item was not appropriate or possible for your project, or any other pertinent information:
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

2. Preservation of Open Space
   - Percent of natural open space calculation has been performed.
     Percent=________________
   - An open space or cluster subdivision design has been used.
   - Open space/common areas are delineated.
   - Open space is retained in a natural condition.
☐ Open space is designed to protect critical resources such as vegetated buffers in riparian areas or connected to existing protected open space.
☐ Reduced setbacks, frontages, and right-of-way widths have been used where practicable.
☐ *For items not checked, please use the space below to explain why that item was not appropriate or possible for your project, or any other pertinent information:*

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

_______________________________________________________

3. Minimization of Land Disturbance
☐ The proposed building(s) is/are located where development can occur with the least environmental impact.
☐ Disturbance areas have been delineated to avoid unnecessary clearing or grading.
☐ Native vegetation outside the immediate construction areas remains undisturbed or will be restored.
☐ Plan includes detail on construction methods and sequencing to minimize compaction of natural and future stormwater areas.
☐ *For items not checked, please use the space below to explain why that item was not appropriate or possible for your project, or any other pertinent information:*

___________________________________________________________________
___________________________________________________________________
___________________________________________________________________

_______________________________________________________

4. Reduce and Disconnect Impervious Cover
☐ Impervious surfaces have been kept to the minimum extent practicable, using the following methods (check which methods were used):
   ☐ Minimized road widths
   ☐ Minimized driveway area
   ☐ Minimized sidewalk area
   ☐ Minimized cul-de-sacs
   ☐ Minimized building footprint
   ☐ Minimized parking lot area
☐ Impervious surfaces have been disconnected from the stormwater system, and directed to appropriate pervious areas, where practicable. Pervious areas may be LID practices, or uncompacted turf areas.
5. **LID Practices Installed**

- □ Sheet flow is used to the maximum extent possible to avoid concentrating runoff.
- □ Vegetated swales have been installed adjacent to driveways and/or roads in lieu of a curb and gutter stormwater collection system.
- □ Rooftop drainage is discharged to bioretention/rain gardens.
- □ Rooftop drainage is discharged to drywell or infiltration trench.
- □ Rain water harvesting methods such as rain barrels or cisterns have been installed to manage roof drainage.
- □ Driveway, roadway, and/or parking lot drainage is directed to bioretention/rain gardens.
- □ Cul-de-sacs include a landscaped bioretention island.
- □ Vegetated roof systems have been installed, if appropriate.
- □ Pervious pavements have been installed, if appropriate.

*For items not checked, please use the space below to explain why that item was not appropriate or possible for your project, or any other pertinent information:*

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

6. **Naturally vegetated areas retained along streams corridors or lake/pond frontage**

- □ 300 foot width (best for preservation of wildlife corridors).
- □ 200 foot wide.
- □ 100 foot wide (minimum recommended for aquatic habitat protection).
- □ Less than 100 foot wide

*Please use the space below to explain why a vegetative strip less than 100 feet appropriate for your project, or any other pertinent information:*

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

The Natchaug Healthy Watershed Protection Projected was funded in part by the CT Department of Environmental Protection with a US EPA Clean Water Act §319 Non-Point Source Grant.
7. “Alternative” Lawn Options were designed as landscape features in the landscape plan
   □ Perennial groundcovers
   □ Low maintenance sedges or fine fescues
   □ Native plant meadows
   □ Other alternatives

For items not checked, please use the space below to explain why that item was not appropriate or possible for your project, or any other pertinent information:
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

8. On-site wastewater system design is compliant with the Connecticut Public Health Codes.
   □ Septic systems and leaching fields are a minimum of 50 feet from water resources and 100 feet from reservoirs.¹
   □ The separating distance between the on-site wastewater disposal system and storm water systems (e.g., infiltration, retention basins) meet Standards for Subsurface Sewage Disposal Systems.²

<table>
<thead>
<tr>
<th>Development Type</th>
<th>Separating Distance (feet)</th>
<th>Special Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-family residential building lots</td>
<td>50</td>
<td>Distance shall be reduced to 25 feet to a leaching system if Minimum Leaching System Spread (MLSS) is not applicable or the storm water system is not up-gradient or down-gradient. Distances may be further reduced to 10 feet for minor infiltration systems (e.g., rain gardens) with the approval from the local director of health if demonstrated that the leaching system shall not be adversely impacted.</td>
</tr>
<tr>
<td>Other lots (e.g., commercial, multi-family)</td>
<td>75</td>
<td>Distance shall be reduced to 50 feet to leaching system if Minimum Leaching System Spread (MLSS) is not applicable or the storm water system is not up-gradient or down-gradient, or with the approval from the local director of health if demonstrated that the leaching system shall not be adversely impacted. The local director of health may require increased distances or an engineered assessment on the operation of the leaching system if localized groundwater mounding is a concern.</td>
</tr>
</tbody>
</table>

The Natchaug Healthy Watershed Protection Projected was funded in part by the CT Department of Environmental Protection with a US EPA Clean Water Act §319 Non-Point Source Grant.
For items not checked, please use the space below to explain why that item was not appropriate or possible for your project, or any other pertinent information:

___________________________________________________________________________
_______________________________________
___________________________________________________________________________
9. **Operations and Maintenance Plans.** For each approved low impact development or green infrastructure practice, an operations and maintenance schedule has been prepared that includes a schedule of required maintenance and who the responsible party is to complete this maintenance. Have these documents been drafted?
   - Yes
   - No
   - Pending approval

10. **Notification of Windham Water Works.** Sections 8-3i and 22a-42f of the State Statutes require applicants to provide to all water companies written notice of an application, petition, request or plan if the proposed project is located within the watershed of their public drinking supply. For projects upstream of the Willimantic Reservoir, this written notice must be filed with Windham Water Works located at 174 Storrs Road Mansfield Center, CT 06250. Has Windham Water Works been notified?
   - Yes
   - No

---