UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 1 -- Catchment Information

Subwatershed: Bear Branch
Location of Catchment Centroid on ADC Map: Year: 2001 Page: 4 Grid: E6
State Plane Coordinates of Outfall Location: X: 1351552 Y: 518515
Closest Road Intersection to Outfall: Laurel Place and Catalpa Street
Outfall SDI ID or Outfall Description: System 85046A, SDI 54568; outfalls to Laurel Lakes

Objective: Demonstration / Impairment(s) (Sheet 1) Demonstration, Water Quality

Drainage Area (ac): 25.3 Impervious Area (ac): 20.2
Percent Impervious: 80% Soil Recharge Factor (S): 0.13
WQ, (required): 1.624 Re, (required): 0.211
Predominant Land Use: commercial Mean Depth to Ground Water: 1-2 ft
Sanitary System: ☐ Septic ☑ Municipal Sewer Water Supply: ☐ On Site Well ☑ Public Water

Storm Drainage System Within Catchment
Piped: 100% Open Channels: 0%
Area Drained by System: 100%
Location in Catchment: ☐ Headwaters ☐ Middle ☐ Lower ☑ All
Open Channel Lining- Vegetation: 0% Riprap: 0% Concrete: 0% Other: 0%

Existing IMP(s) / BMP(s)
SDI ID: 85127A Type (number from Sheets 4 & 5): 16 Age: 17
Closest Road Intersection to IMP / BMP: Laurel Place and Cherry Lane
Catchment Area Treated (ac) : 9.82 Percentage Catchment Treated: 39%
WQ, Provided: ☐ YES ☑ NO Re, Provided: ☐ YES ☑ NO Cp Provided: ☐ YES ☑ NO

SDI ID: ________ Type (number from Sheets 4 & 5): ________ Age: ________
Closest Road Intersection to IMP / BMP: 
Catchment Area Treated (ac) : Percentage Catchment Treated: 
WQ, Provided: ☐ YES ☑ NO Re, Provided: ☐ YES ☑ NO Cp Provided: ☐ YES ☑ NO

SDI ID: ________ Type (number from Sheets 4 & 5): ________ Age: ________
Closest Road Intersection to IMP / BMP: 
Catchment Area Treated (ac) : Percentage Catchment Treated: 
WQ, Provided: ☐ YES ☑ NO Re, Provided: ☐ YES ☑ NO Cp Provided: ☐ YES ☑ NO
## CATCHMENT SUMMARY

<table>
<thead>
<tr>
<th align="right">WQ&lt;sub&gt;v&lt;/sub&gt; (provided):</th>
<th>0.64</th>
<th>Re&lt;sub&gt;v&lt;/sub&gt; (provided):</th>
<th>0.09</th>
</tr>
</thead>
<tbody>
<tr>
<td align="right">Area Treated (ac):</td>
<td>9.82</td>
<td>Impervious Area Treated (ac):</td>
<td>8.03</td>
</tr>
<tr>
<td align="right">Area Treated (%):</td>
<td>39%</td>
<td>Impervious Area Treated (%):</td>
<td>40%</td>
</tr>
</tbody>
</table>

### Comments

- [ ]
- [ ]
- [ ]
- [ ]
- [ ]
- [ ]
**UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)**

**FORM 2 -- Site Information**

<table>
<thead>
<tr>
<th>Site Name: Lowes Home Improvement Center</th>
<th>Address: 14398 Baltimore Avenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Owner: Laurel Lakes LLC</td>
<td></td>
</tr>
</tbody>
</table>

**State Plane Coordinates of Site Centroid:**
- X: 1351302
- Y: 517018
- Date: 3/25/03

**Personnel:** PM
**Weather:** sunny, 65F deg

- **Area (ac):** 23.9
- **Impervious Area (ac):** 21
- **Percent Impervious:** 88%
- **Soil Recharge Factor (S):** 0.13
- **WQ_v (required):** 1.68
- **Re_v (required):** 0.22

- **Property Area (ac):** 25.3
- **Property Area Included in Site:** 94%
- **Amount of Catchment Occupied by Site:** 94%

**Storm Drainage System Within Site**
- **Piped:** 100%
- **Open Channels:** 0%
- **Area Drained by System:** 100%
- **Open Channel Lining - Vegetation:** 0%
- **Riprap:** 0%
- **Concrete:** 0%
- **Other:** 0%

**Existing IMP(s) / BMP(s)** (Identified on Page 1, FORM 1, Catchment Information)

<table>
<thead>
<tr>
<th>SDI ID</th>
<th>Condition</th>
<th>Excellent</th>
<th>Good</th>
<th>Average</th>
<th>Fair</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Site Information**

- **Type of Pavement:** ☑ Bituminous  ☑ Concrete  ☐ Gravel  ☐ Grid Pavers  ☐ Other
- **Pavement Condition:** ☐ Excellent  ☑ Good  ☐ Average  ☐ Fair  ☐ Poor
- **Underdrains can be easily directed to existing storm drains or daylighted:** ☑ YES  ☐ NO
- **Gutter/Exterior Downspouts Present:** ☑ YES  ☐ NO
- **Roof Connected Directly to Storm Drain:** ☑ YES  ☐ NO
- **Roof Drains onto Impervious Surface:** ☐ YES  ☐ NO
- **Obvious Existing Drainage Problems:** ☐ Extensive  ☐ Moderate  ☐ Average  ☐ Limited  ☑ None
- **Steep Slopes Present:** ☐ Extensive  ☐ Moderate  ☐ Average  ☑ Limited  ☐ None
- **Existing Landscaping:** ☐ Extensive  ☐ Moderate  ☐ Average  ☑ Limited  ☐ None
- **Mature / Specimen Trees:** ☐ Extensive  ☐ Moderate  ☐ Average  ☑ Limited  ☐ None
- **Area Available for Aboveground BMPs:** ☐ Extensive  ☐ Moderate  ☐ Average  ☑ Limited  ☐ None
- **Existing Cover of Potential Aboveground BMP Locations:** ☑ Grass  ☑ Landscaped  ☐ Gravel  ☐ Other Pervious Pavement  ☐ Other Impervious
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 2 -- Site Information (concluded)

Commercial / Institutional
Islands Present: ☑ YES ☐ NO
Curb Present Around Island: ☑ YES ☐ NO
Ground Level of Island Relative to Pavement: ☑ Above ☐ Equal ☐ Below
Island Landscaping: ☐ Impervious ☑ Bare Earth ☐ Gravel ☑ Grass ☐ Mulch ☐ Herbaceous Plants ☐ Shrubs
☐ Trees (<2 in. DBH) ☑ Trees (2 - 6 in. DBH) ☐ Trees (>6 in. DBH)

Trees have sufficient spacing to allow IMPs: ☑ YES ☐ NO
Parking area that can be directed to potential treatment area with little grading: ___ 90% ___

SITE SUMMARY

<table>
<thead>
<tr>
<th>WQ$_v$ (provided) :</th>
<th>0.64</th>
<th>Re$_v$ (provided):</th>
<th>0.09</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Treated (ac) :</td>
<td>9.82</td>
<td>Impervious Area Treated (ac):</td>
<td>8.03</td>
</tr>
<tr>
<td>Area Treated (%) :</td>
<td>39</td>
<td>Impervious Area Treated (%):</td>
<td>40</td>
</tr>
</tbody>
</table>

Photographs

<table>
<thead>
<tr>
<th>No.</th>
<th>Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>414</td>
<td>looking south at west (back) side of building</td>
</tr>
<tr>
<td>415</td>
<td>looking east at north side of building</td>
</tr>
<tr>
<td>416</td>
<td>looking north at east (front) side of building</td>
</tr>
<tr>
<td>417</td>
<td>looking south at east (front) side of building</td>
</tr>
<tr>
<td>418</td>
<td>looking west at north side of building</td>
</tr>
<tr>
<td>419</td>
<td>looking north at west (back) side of building</td>
</tr>
</tbody>
</table>

Comments
Pavement on site is 95% bituminous and 5% concrete.
Aerial photograph is out of date and no longer accurate. Building footprint has changed.
Pavement affected by construction is new. Older pavement still exists. New site information is needed. Storm drain system has been modified.
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 2 -- Site Information
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP ☒  SWM BMP Retrofit ☐  New SWM BMP ☐  Type (Sheets 4 & 5): 7

State Plane Coordinates of IMP / BMP Centroid: X:    Y:    

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1):  1, 4, 7, 16

Treatment Area Ownership:  ☐ Transportation ROW  ☐ Utility ROW  ☐ County  ☐ Other Government  ☒ Private

Infrastructure / Structures / Buildings Impacted:  ☐ YES  ☒ NO

Limited Impact to Adjacent Properties:  ☒ YES  ☐ NO

Area Accessible for Construction:  ☒ YES  ☐ NO

Area Accessible for Maintenance:  ☒ YES  ☐ NO

Limited Permitting Issues:  ☒ YES  ☐ NO

Jurisdictional Wetlands Impacted:  ☐ YES  ☒ NO

Forest Retention Area Impacted:  ☐ YES  ☒ NO

Conservation Easement Impacted:  ☐ YES  ☒ NO

Utilities Present:  ☒ None  ☐ Natural Gas  ☐ Electric  ☐ Telephone  ☐ Cable  ☐ Water  ☐ Sewer  ☐ Other

Utilities Impacted:  ☒ None  ☐ Natural Gas  ☐ Electric  ☐ Telephone  ☐ Cable  ☐ Water  ☐ Sewer  ☐ Other

Impacted Utilities:  ☐ Above Ground  ☐ Underground

Critical Area Impacted:  ☒ YES  ☐ NO

Mature / Specimen Trees Impacted:  ☒ YES  ☐ NO

Existing Landscaping Impacted:  ☒ YES  ☐ NO

Underdrain Needed:  ☐ YES  ☐ NO  Underdrains Can Discharge:  ☐ YES  ☐ NO

Soils are Suitable:  ☐ YES  ☐ NO  Ground Water Table Level Suitable:  ☐ YES  ☐ NO

Estimate IMP / BMP drainage area included on site:  3.92 ac  100%

Retrofit of Existing SWM BMP

SDI ID:  ___________  Add Forebay:  ☐ YES  ☐ NO

Modify Outlet Structure:  ☐ YES  ☐ NO  Add Aquatic Bench:  ☐ YES  ☐ NO

Grade Bottom of Facility:  ☐ YES  ☐ NO  Plant Native Vegetation:  ☐ YES  ☐ NO

Provide Additional Storage Volume:  ☐ YES  ☐ NO

Excavation / Raise the Embankment:  ☐ YES  ☐ NO
IMP / BMP SUMMARY

<table>
<thead>
<tr>
<th>WQ _ (provided):</th>
<th>Undetermined</th>
<th>Re _ (provided):</th>
<th>0.000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Treated (ac):</td>
<td>3.92</td>
<td>Impervious Area Treated (ac):</td>
<td>3.92</td>
</tr>
</tbody>
</table>

Photographs

<table>
<thead>
<tr>
<th>No.</th>
<th>Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>871</td>
<td>looking north at front of building</td>
</tr>
<tr>
<td>872</td>
<td>looking northeast at back of building</td>
</tr>
</tbody>
</table>

Comments

Roof drains have downspouts that connect directly to storm drain. Connection could be broken.

IMP area = 170,750 sq ft
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

871

872
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP ☑️  SWM BMP Retrofit ☐  New SWM BMP ☐  Type (Sheets 4 & 5): 39

State Plane Coordinates of IMP / BMP Centroid: X: ___ Y: ___

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): 1, 2, 3, 4, 7, 16

Treatment Area Ownership:

- Transportation ROW ☐
- Utility ROW ☐
- County ☐
- Other Government ☐
- Private ☑️
- Other ☐

Infrastructure / Structures / Buildings Impacted: YES ☑️ NO ☐

Limited Impact to Adjacent Properties: YES ☑️ NO ☐

Area Accessible for Construction: YES ☑️ NO ☐

Area Accessible for Maintenance: YES ☑️ NO ☐

Limited Permitting Issues: YES ☑️ NO ☐

Jurisdictional Wetlands Impacted: YES ☑️ NO ☐

Forest Retention Area Impacted: YES ☑️ NO ☐

Conservation Easement Impacted: YES ☑️ NO ☐

Utilities Present:

- None ☐
- Natural Gas ☐
- Electric ☑️
- Telephone ☐
- Cable ☐
- Water ☐
- Sewer ☐
- Other ☐

Utilities Impacted:

- None ☐
- Natural Gas ☐
- Electric ☑️
- Telephone ☐
- Cable ☐
- Water ☐
- Sewer ☐
- Other ☐

Impacted Utilities:

- Above Ground ☐
- Underground ☑️

Critical Area Impacted: YES ☑️ NO ☐

Mature / Specimen Trees Impacted: YES ☑️ NO ☐

Existing Landscaping Impacted: YES ☑️ NO ☐

Underdrain Needed: YES ☑️ NO ☐

Underdrains Can Discharge: YES ☑️ NO ☐

Soils are Suitable: YES ☑️ NO ☐

Ground Water Table Level Suitable: YES ☑️ NO ☐

Estimate IMP / BMP drainage area included on site: 0.92 ac 100%

Retrofit of Existing SWM BMP

SDI ID: ____________  Add Forebay: YES ☐ NO ☐

Modify Outlet Structure: YES ☐ NO ☐

Add Aquatic Bench: YES ☐ NO ☐

Grade Bottom of Facility: YES ☐ NO ☐

Plant Native Vegetation: YES ☐ NO ☐

Provide Additional Storage Volume: YES ☐ NO ☐

Excavation / Raise the Embankment: YES ☐ NO ☐
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice (concluded)

IMP / BMP SUMMARY

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>WQ_v (provided)</td>
<td>0.067</td>
</tr>
<tr>
<td>Re_v (provided)</td>
<td>0.009</td>
</tr>
<tr>
<td>Area Treated (ac)</td>
<td>0.92</td>
</tr>
<tr>
<td>Impervious Area Treated (ac)</td>
<td>0.85</td>
</tr>
</tbody>
</table>

Photographs

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>873</td>
<td>looking east</td>
</tr>
<tr>
<td>874</td>
<td>looking west</td>
</tr>
</tbody>
</table>

Comments

IMP area = 5,931 sq ft
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP ☑  SWM BMP Retrofit ☐  New SWM BMP ☐  Type (Sheets 4 & 5): 39

State Plane Coordinates of IMP / BMP Centroid: X: ________  Y: ________

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): 1, 2, 3, 4, 7, 16

Treatment Area Ownership: ☐ Transportation ROW  ☐ Utility ROW  ☐ County  ☐ Other Government  ☑ Private

Infrastructure / Structures / Buildings Impacted: ☑ YES  ☐ NO

Limited Impact to Adjacent Properties: ☑ YES  ☐ NO

Area Accessible for Construction: ☑ YES  ☐ NO

Area Accessible for Maintenance: ☑ YES  ☐ NO

Limited Permitting Issues: ☑ YES  ☐ NO

Jurisdictional Wetlands Impacted: ☑ YES  ☐ NO

Forest Retention Area Impacted: ☑ YES  ☐ NO

Conservation Easement Impacted: ☑ YES  ☐ NO

Utilities Present: ☐ None  ☐ Natural Gas  ☑ Electric  ☐ Telephone  ☐ Cable  ☐ Water  ☐ Sewer  ☐ Other

Utilities Impacted: ☐ None  ☐ Natural Gas  ☑ Electric  ☐ Telephone  ☐ Cable  ☐ Water  ☐ Sewer  ☐ Other

Impacted Utilities: ☐ Above Ground  ☑ Underground

Critical Area Impacted: ☐ YES  ☐ NO

Mature / Specimen Trees Impacted: ☑ YES  ☐ NO

Existing Landscaping Impacted: ☑ YES  ☐ NO

Underdrain Needed: ☑ YES  ☐ NO  Underdrains Can Discharge: ☑ YES  ☐ NO

Soils are Suitable: ☑ YES  ☐ NO  Ground Water Table Level Suitable: ☑ YES  ☐ NO

Estimate IMP / BMP drainage area included on site: 0.49 ac  100%

Retrofit of Existing SWM BMP

SDI ID: ______________  Add Forebay: ☐ YES  ☐ NO

Modify Outlet Structure: ☐ YES  ☐ NO  Add Aquatic Bench: ☐ YES  ☐ NO

Grade Bottom of Facility: ☐ YES  ☐ NO  Plant Native Vegetation: ☐ YES  ☐ NO

Provide Additional Storage Volume: ☐ YES  ☐ NO

Excavation / Raise the Embankment: ☐ YES  ☐ NO
## IMP / BMP SUMMARY

<table>
<thead>
<tr>
<th>Description</th>
<th>Area Treated (ac)</th>
<th>Re&lt;sub&gt;v&lt;/sub&gt; (provided)</th>
<th>WQ&lt;sub&gt;v&lt;/sub&gt; (provided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.49 Impervious Area Treated</td>
<td>0.42</td>
<td>0.004</td>
<td>0.033</td>
</tr>
</tbody>
</table>

## Photographs

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>875</td>
<td>looking west</td>
</tr>
<tr>
<td>876</td>
<td>looking east</td>
</tr>
</tbody>
</table>

## Comments

IMP treats 99% of the drainage area
IMP size = 2,871 sq ft
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP [✓]  SWM BMP Retrofit [ ]  New SWM BMP [ ]  Type (Sheets 4 & 5): 39

State Plane Coordinates of IMP / BMP Centroid: X: _______  Y: _______

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): 1, 2, 3, 4, 7, 16

Treatment Area Ownership: [ ] Transportation ROW  [ ] Utility ROW  [ ] County  [ ] Other Government  [✓] Private

[ ] Yes  [✓] No

Infrastructure / Structures / Buildings Impacted:  Limited Impact to Adjacent Properties: [✓] Yes  [ ] No

Area Accessible for Construction: [✓] Yes  [ ] No  Area Accessible for Maintenance: [✓] Yes  [ ] No

Limited Permitting Issues: [✓] Yes  [ ] No

Jurisdictional Wetlands Impacted: [ ] Yes  [✓] No  Forest Retention Area Impacted: [ ] Yes  [✓] No

Conservation Easement Impacted: [ ] Yes  [✓] No

Utilities Present: [ ] None  [✓] Natural Gas  [✓] Electric  [ ] Telephone  [ ] Cable  [ ] Water  [ ] Sewer  [ ] Other

Utilities Impacted: [ ] None  [✓] Natural Gas  [✓] Electric  [ ] Telephone  [ ] Cable  [ ] Water  [ ] Sewer  [ ] Other

Impacted Utilities: [ ] Above Ground  [✓] Underground

Critical Area Impacted: [✓] Yes  [ ] No

Mature / Specimen Trees Impacted: [✓] Yes  [ ] No  Existing Landscaping Impacted: [✓] Yes  [ ] No

Underdrain Needed: [✓] Yes  [ ] No  Underdrains Can Discharge: [✓] Yes  [ ] No

Soils are Suitable: [✓] Yes  [ ] No  Ground Water Table Level Suitable: [✓] Yes  [ ] No

Estimate IMP / BMP drainage area included on site: 0.94 ac  100%

Retrofit of Existing SWM BMP

SDI ID: ____________  Add Forebay: [ ] Yes  [ ] No

Modify Outlet Structure: [ ] Yes  [ ] No  Add Aquatic Bench: [ ] Yes  [ ] No

Grade Bottom of Facility: [ ] Yes  [ ] No  Plant Native Vegetation: [ ] Yes  [ ] No

Provide Additional Storage Volume: [ ] Yes  [ ] No

Excavation / Raise the Embankment: [ ] Yes  [ ] No
## IMP / BMP SUMMARY

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$WQ_v$ (provided)</td>
<td>0.069</td>
</tr>
<tr>
<td>$Re_v$ (provided)</td>
<td>0.009</td>
</tr>
<tr>
<td>Area Treated (ac)</td>
<td>0.94</td>
</tr>
<tr>
<td>Impervious Area Treated (ac)</td>
<td>0.87</td>
</tr>
</tbody>
</table>

### Photographs

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>877</td>
<td>looking south</td>
</tr>
<tr>
<td>878</td>
<td>looking north</td>
</tr>
</tbody>
</table>

### Comments

IMP size = 6,032 sq ft
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP  ✔  SWM BMP Retrofit  ❌  New SWM BMP  ❌  Type (Sheets 4 & 5):  39

State Plane Coordinates of IMP / BMP Centroid:  X:  _______  Y:  _______

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1):  1, 2, 3, 4, 7, 16

Treatment Area Ownership:  ☑ Transportation ROW  ☐ Utility ROW  ☑ County  ☐ Other Government  ☑ Private

Infrastructure / Structures / Buildings Impacted:  ☑ YES  ☐ NO

Limited Impact to Adjacent Properties:  ☑ YES  ☐ NO

Area Accessible for Construction:  ☑ YES  ☐ NO

Area Accessible for Maintenance:  ☑ YES  ☐ NO

Limited Permitting Issues:  ☑ YES  ☐ NO

Jurisdictional Wetlands Impacted:  ☑ YES  ☐ NO

Forest Retention Area Impacted:  ☑ YES  ☐ NO

Conservation Easement Impacted:  ☑ YES  ☐ NO

Utilities Present:  ☑ None  ☑ Natural Gas  ☑ Electric  ☑ Telephone  ☑ Cable  ☑ Water  ☑ Sewer  ☐ Other

Utilities Impacted:  ☑ None  ☑ Natural Gas  ☑ Electric  ☑ Telephone  ☑ Cable  ☑ Water  ☑ Sewer  ☐ Other

Impacted Utilities:  ☑ Above Ground  ☑ Underground

Critical Area Impacted:  ☑ YES  ☐ NO

Mature / Specimen Trees Impacted:  ☑ YES  ☐ NO

Existing Landscaping Impacted:  ☑ YES  ☐ NO

Underdrain Needed:  ☑ YES  ☐ NO  Underdrains Can Discharge:  ☑ YES  ☐ NO

Soils are Suitable:  ☑ YES  ☐ NO  Ground Water Table Level Suitable:  ☑ YES  ☐ NO

Estimate IMP / BMP drainage area included on site:  0.71 ac  100%

Retrofit of Existing SWM BMP

SDI ID:  ________________  Add Forebay:  ☑ YES  ☐ NO

Modify Outlet Structure:  ☑ YES  ☐ NO  Add Aquatic Bench:  ☑ YES  ☐ NO

Grade Bottom of Facility:  ☑ YES  ☐ NO  Plant Native Vegetation:  ☑ YES  ☐ NO

Provide Additional Storage Volume:  ☑ YES  ☐ NO

Excavation / Raise the Embankment:  ☑ YES  ☐ NO
## IMP / BMP SUMMARY

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>WQ&lt;sub&gt;v&lt;/sub&gt; (provided):</td>
<td>0.052</td>
</tr>
<tr>
<td>Re&lt;sub&gt;v&lt;/sub&gt; (provided):</td>
<td>0.007</td>
</tr>
<tr>
<td>Area Treated (ac):</td>
<td>0.71</td>
</tr>
<tr>
<td>Impervious Area Treated (ac):</td>
<td>0.66</td>
</tr>
</tbody>
</table>

## Photographs

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>879</td>
<td>looking south</td>
</tr>
<tr>
<td>880</td>
<td>looking east</td>
</tr>
</tbody>
</table>

## Comments

IMP size = 4,765 sq ft
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP ☑  SWM BMP Retrofit ☐  New SWM BMP ☐  Type (Sheets 4 & 5): 39

State Plane Coordinates of IMP / BMP Centroid:  X: _______  Y: _______

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1):  1, 2, 3, 4, 7, 16

Treatment Area Ownership:
- Transportation ROW ☐
- Utility ROW ☐
- County ☐
- Other Government ☐
- Private ✓ ☐
- Other

Infrastructure / Structures / Buildings Impacted:  YES ☐

Limited Impact to Adjacent Properties:  YES ☑

Area Accessible for Construction:  YES ☑

Area Accessible for Maintenance:  YES ☑

Limited Permitting Issues:  YES ☑

Jurisdictional Wetlands Impacted:  YES ☑

Forest Retention Area Impacted:  YES ☑

Conservation Easement Impacted:  YES ☑

Utilities Present:
- None ☐
- Natural Gas ☐
- Electric ☑
- Telephone ☐
- Cable ☐
- Water ☐
- Sewer ☐
- Other

Utilities Impacted:
- None ☐
- Natural Gas ☐
- Electric ☑
- Telephone ☐
- Cable ☐
- Water ☐
- Sewer ☐
- Other

Impacted Utilities:
- Above Ground ☐
- Underground ✓

Critical Area Impacted:  YES ☑

Mature / Specimen Trees Impacted:  YES ☑

Existing Landscaping Impacted:  YES ☑

Underdrain Needed:  YES ☑

Underdrains Can Discharge:  YES ☑

Soils are Suitable:  YES ☑

Ground Water Table Level Suitable:  YES ☑

Estimate IMP / BMP drainage area included on site:  0.69 ac  100%

Retrofit of Existing SWM BMP

SDI ID:  _____________

Add Forebay:  YES ☑

Modify Outlet Structure:  YES ☑

Add Aquatic Bench:  YES ☑

Grade Bottom of Facility:  YES ☑

Plant Native Vegetation:  YES ☑

Provide Additional Storage Volume:  YES ☑

Excavation / Raise the Embankment:  YES ☑
### IMP / BMP SUMMARY

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>WQ_v (provided)</td>
<td>0.043</td>
</tr>
<tr>
<td>Re_v (provided)</td>
<td>0.006</td>
</tr>
<tr>
<td>Area Treated (ac)</td>
<td>0.69</td>
</tr>
<tr>
<td>Impervious Area Treated (ac)</td>
<td>0.54</td>
</tr>
</tbody>
</table>

### Photographs

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>881</td>
<td>looking west</td>
</tr>
<tr>
<td>882</td>
<td>looking north</td>
</tr>
</tbody>
</table>

### Comments

IMP treats 99% of the drainage area

IMP size = 3,717 sq ft
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP ☑️ SWM BMP Retrofit ☐ New SWM BMP ☐ Type (Sheets 4 & 5): 39

State Plane Coordinates of IMP / BMP Centroid: X: _______ Y: _______

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): 1, 2, 3, 4, 7, 16

Treatment Area Ownership: ☐ Transportation ROW ☐ Utility ROW ☐ County ☐ Other Government ☑️ Private

Infrastructure / Structures / Buildings Impacted: ☑️ YES ☐ NO

Limited Impact to Adjacent Properties: ☑️ YES ☐ NO

Area Accessible for Construction: ☑️ YES ☐ NO

Area Accessible for Maintenance: ☑️ YES ☐ NO

Limited Permitting Issues: ☑️ YES ☐ NO

Jurisdictional Wetlands Impacted: ☐ YES ☑️ NO

Forest Retention Area Impacted: ☐ YES ☑️ NO

Conservation Easement Impacted: ☐ YES ☑️ NO

Utilities Present: ☐ None ☑️ Natural Gas ☐ Electric ☐ Telephone ☐ Cable ☐ Water ☐ Sewer ☐ Other

Utilities Impacted: ☐ None ☑️ Natural Gas ☐ Electric ☐ Telephone ☐ Cable ☐ Water ☐ Sewer ☐ Other

Impacted Utilities: ☐ Above Ground ☑️ Underground

Critical Area Impacted: ☑️ YES ☐ NO

Mature / Specimen Trees Impacted: ☑️ YES ☐ NO

Existing Landscaping Impacted: ☑️ YES ☐ NO

Underdrain Needed: ☑️ YES ☐ NO Underdrains Can Discharge: ☑️ YES ☐ NO

Soils are Suitable: ☑️ YES ☐ NO Ground Water Table Level Suitable: ☑️ YES ☐ NO

Estimate IMP / BMP drainage area included on site: 0.70 ac 100%

Retrofit of Existing SWM BMP

SDI ID: _______________ Add Forebay: ☐ YES ☐ NO

Modify Outlet Structure: ☐ YES ☐ NO Add Aquatic Bench: ☐ YES ☐ NO

Grade Bottom of Facility: ☐ YES ☐ NO Plant Native Vegetation: ☑️ YES ☐ NO

Provide Additional Storage Volume: ☐ YES ☐ NO

Excavation / Raise the Embankment: ☐ YES ☐ NO
IMP / BMP SUMMARY

<table>
<thead>
<tr>
<th>Description</th>
<th>WQ&lt;sub&gt;v&lt;/sub&gt; (provided):</th>
<th>Re&lt;sub&gt;v&lt;/sub&gt; (provided):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Treated (ac):</td>
<td>0.70</td>
<td>Impervious Area Treated (ac):</td>
</tr>
</tbody>
</table>

Photographs

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>883</td>
<td>looking west</td>
</tr>
<tr>
<td>884</td>
<td>looking north</td>
</tr>
</tbody>
</table>

Comments

IMP treats 99% of the drainage area
IMP size = 3,921 sq ft
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP ☑ SWM BMP Retrofit ☐ New SWM BMP ☐ Type (Sheets 4 & 5): 39

State Plane Coordinates of IMP / BMP Centroid: X: ______  Y: ______

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): 1, 2, 3, 4, 7, 16

Treatment Area Ownership: ☐ Transportation ROW ☐ Utility ROW ☐ County ☐ Other Government ☑ Private

Infrastructure / Structures / Buildings Impacted: ☑ YES ☐ NO

Limited Impact to Adjacent Properties: ☑ YES ☐ NO

Area Accessible for Construction: ☑ YES ☐ NO

Area Accessible for Maintenance: ☑ YES ☐ NO

Limited Permitting Issues: ☑ YES ☐ NO

Jurisdictional Wetlands Impacted: ☐ YES ☐ NO

Forest Retention Area Impacted: ☐ YES ☐ NO

Conservation Easement Impacted: ☐ YES ☐ NO

Utilities Present: ☐ None ☑ Natural Gas ☑ Electric ☑ Telephone ☑ Cable ☑ Water ☑ Sewer ☐ Other

Utilities Impacted: ☐ None ☑ Natural Gas ☑ Electric ☑ Telephone ☑ Cable ☑ Water ☑ Sewer ☐ Other

Impacted Utilities: ☐ Above Ground ☑ Underground

Critical Area Impacted: ☑ YES ☐ NO

Mature / Specimen Trees Impacted: ☑ YES ☐ NO

Existing Landscaping Impacted: ☑ YES ☐ NO

Underdrain Needed: ☑ YES ☐ NO  Underdrains Can Discharge: ☑ YES ☐ NO

Soils are Suitable: ☑ YES ☐ NO  Ground Water Table Level Suitable: ☑ YES ☐ NO

Estimate IMP / BMP drainage area included on site: ac 100%

Retrofit of Existing SWM BMP

SDI ID: ______________  Add Forebay: ☑ YES ☐ NO

Modify Outlet Structure: ☑ YES ☐ NO  Add Aquatic Bench: ☑ YES ☐ NO

Grade Bottom of Facility: ☑ YES ☐ NO  Plant Native Vegetation: ☑ YES ☐ NO

Provide Additional Storage Volume: ☐ YES ☐ NO

Excavation / Raise the Embankment: ☐ YES ☐ NO
### IMP / BMP SUMMARY

<table>
<thead>
<tr>
<th>WQ_v (provided):</th>
<th>0.038</th>
<th>Re_v (provided):</th>
<th>0.005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Treated (ac):</td>
<td>0.78</td>
<td>Impervious Area Treated (ac):</td>
<td>0.47</td>
</tr>
</tbody>
</table>

### Photographs

<table>
<thead>
<tr>
<th>No.</th>
<th>Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>885</td>
<td>looking west</td>
</tr>
<tr>
<td>886</td>
<td>looking north</td>
</tr>
</tbody>
</table>

### Comments

IMP size = 4,310 sq ft
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice
 UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP ☑ SWM BMP Retrofit ☐ New SWM BMP ☑ Type (Sheets 4 & 5): 39

State Plane Coordinates of IMP / BMP Centroid: X: _______ Y: _______

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): 1, 2, 3, 4, 7, 16

Treatment Area Ownership: ☑ Transportation ROW ☑ Utility ROW ☐ County ☐ Other Government ☑ Private

Infrastructure / Structures / Buildings Impacted: ☑ YES ☐ NO

Limited Impact to Adjacent Properties: ☑ YES ☐ NO

Area Accessible for Construction: ☑ YES ☐ NO

Area Accessible for Maintenance: ☑ YES ☐ NO

Limited Permitting Issues: ☑ YES ☐ NO

Jurisdictional Wetlands Impacted: ☑ YES ☐ NO

Forest Retention Area Impacted: ☑ YES ☐ NO

Conservation Easement Impacted: ☑ YES ☐ NO

Utilities Present: ☑ None ☑ Natural Gas ☑ Electric ☑ Telephone ☑ Cable ☑ Water ☑ Sewer ☑ Other

Utilities Impacted: ☑ None ☑ Natural Gas ☑ Electric ☑ Telephone ☑ Cable ☑ Water ☑ Sewer ☑ Other

Impacted Utilities: ☑ Above Ground ☑ Underground

Critical Area Impacted: ☑ YES ☐ NO

Mature / Specimen Trees Impacted: ☑ YES ☐ NO

Existing Landscaping Impacted: ☑ YES ☐ NO

Underdrain Needed: ☑ YES ☐ NO Underdrains Can Discharge: ☑ YES ☐ NO

Soils are Suitable: ☑ YES ☐ NO Ground Water Table Level Suitable: ☑ YES ☐ NO

Estimate IMP / BMP drainage area included on site: _______ ac 100%

Retrofit of Existing SWM BMP

SDI ID: ____________ Add Forebay: ☑ YES ☐ NO

Modify Outlet Structure: ☑ YES ☐ NO Add Aquatic Bench: ☑ YES ☐ NO

Grade Bottom of Facility: ☑ YES ☐ NO Plant Native Vegetation: ☑ YES ☐ NO

Provide Additional Storage Volume: ☑ YES ☐ NO

Excavation / Raise the Embankment: ☑ YES ☐ NO
## IMP / BMP SUMMARY

<table>
<thead>
<tr>
<th>WQ&lt;sub&gt;v&lt;/sub&gt; (provided):</th>
<th>0.086</th>
<th>Re&lt;sub&gt;v&lt;/sub&gt; (provided):</th>
<th>0.011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Treated (ac):</td>
<td>1.34</td>
<td>Impervious Area Treated (ac):</td>
<td>1.08</td>
</tr>
</tbody>
</table>

### Photographs

<table>
<thead>
<tr>
<th>No.</th>
<th>Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>887</td>
<td>looking west</td>
</tr>
<tr>
<td>888</td>
<td>looking north</td>
</tr>
</tbody>
</table>

### Comments

IMP size = 8,203 sq ft
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP ☑  SWM BMP Retrofit ☐  New SWM BMP ☐  Type (Sheets 4 & 5): 5

State Plane Coordinates of IMP / BMP Centroid: X:  Y:  

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): 1, 7, 16

Treatment Area Ownership: ☑ Transportation ROW  ☐ Utility ROW  ☑ County  ☐ Other Government  ☑ Private  ☐ Other

Infrastructure / Structures / Buildings Impacted:  ☑ YES  ☐ NO

Limited Impact to Adjacent Properties:  ☑ YES  ☐ NO

Area Accessible for Construction:  ☑ YES  ☐ NO

Area Accessible for Maintenance:  ☑ YES  ☐ NO

Limited Permitting Issues:  ☑ YES  ☐ NO

Jurisdictional Wetlands Impacted:  ☑ YES  ☐ NO

Forest Retention Area Impacted:  ☑ YES  ☐ NO

Conservation Easement Impacted:  ☐ YES  ☑ NO

Utilities Present:  ☑ None  ☐ Natural Gas  ☑ Electric  ☐ Telephone  ☐ Cable  ☐ Water  ☐ Sewer  ☐ Other  

Utilities Impacted:  ☑ None  ☐ Natural Gas  ☑ Electric  ☐ Telephone  ☐ Cable  ☐ Water  ☐ Sewer  ☐ Other  

Impacted Utilities:  ☐ Above Ground  ☑ Underground

Critical Area Impacted:  ☑ YES  ☐ NO

Mature / Specimen Trees Impacted:  ☑ YES  ☐ NO

Existing Landscaping Impacted:  ☑ YES  ☐ NO

Underdrain Needed:  ☑ YES  ☐ NO  Underdrains Can Discharge:  ☐ YES  ☑ NO

Soils are Suitable:  ☑ YES  ☐ NO  Ground Water Table Level Suitable:  ☑ YES  ☐ NO

Estimate IMP / BMP drainage area included on site:  ac  100%

Retrofit of Existing SWM BMP

SDI ID:  Add Forebay:  ☐ YES  ☑ NO

Modify Outlet Structure:  ☐ YES  ☑ NO  Add Aquatic Bench:  ☐ YES  ☑ NO

Grade Bottom of Facility:  ☑ YES  ☐ NO  Plant Native Vegetation:  ☑ YES  ☐ NO

Provide Additional Storage Volume:  ☐ YES  ☑ NO

Excavation / Raise the Embankment:  ☐ YES  ☑ NO
**IMP / BMP SUMMARY**

<table>
<thead>
<tr>
<th>WQ&lt;sub&gt;v&lt;/sub&gt; (provided):</th>
<th>n/a</th>
<th>Re&lt;sub&gt;v&lt;/sub&gt; (provided):</th>
<th>n/a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area Treated (ac):</td>
<td>n/a</td>
<td>Impervious Area Treated (ac):</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**Photographs**

<table>
<thead>
<tr>
<th>No.</th>
<th>Description:</th>
</tr>
</thead>
<tbody>
<tr>
<td>889</td>
<td><em>looking west to garden center</em></td>
</tr>
</tbody>
</table>

**Comments**

One rain barrel/cistern could be used at each downspout. The downspouts go directly to the storm drain.
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP ☑  SWM BMP Retrofit ☐  New SWM BMP ☐  Type (Sheets 4 & 5): 38

State Plane Coordinates of IMP / BMP Centroid:  X: ______  Y: ______

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): 1, 2, 3, 4, 7, 16

Treatment Area Ownership: ☐ Transportation ROW  ☐ Utility ROW  ☐ County  ☐ Other Government  ☑ Private

Infrastructure / Structures / Buildings Impacted:  ☐ YES  ☑ NO

Limited Impact to Adjacent Properties:  ☑ YES  ☐ NO

Area Accessible for Construction:  ☑ YES  ☐ NO

Area Accessible for Maintenance:  ☑ YES  ☐ NO

Limited Permitting Issues:  ☑ YES  ☐ NO

Jurisdictional Wetlands Impacted:  ☐ YES  ☑ NO

Forest Retention Area Impacted:  ☐ YES  ☑ NO

Conservation Easement Impacted:  ☐ YES  ☑ NO

Utilities Present:  ☐ None  ☐ Natural Gas  ☑ Electric  ☐ Telephone  ☐ Cable  ☐ Water  ☐ Sewer  ☐ Other

Utilities Impacted:  ☐ None  ☐ Natural Gas  ☑ Electric  ☐ Telephone  ☐ Cable  ☐ Water  ☐ Sewer  ☐ Other

Impacted Utilities:  ☐ Above Ground  ☑ Underground

Critical Area Impacted:  ☐ YES  ☑ NO

Mature / Specimen Trees Impacted:  ☐ YES  ☑ NO

Existing Landscaping Impacted:  ☑ YES  ☐ NO

Underdrain Needed:  ☑ YES  ☐ NO  Underdrains Can Discharge:  ☑ YES  ☐ NO

Soils are Suitable:  ☑ YES  ☐ NO  Ground Water Table Level Suitable:  ☑ YES  ☐ NO

Estimate IMP / BMP drainage area included on site:  0.19 ac  100%

Retrofit of Existing SWM BMP

SDI ID:  ________________  Add Forebay:  ☐ YES  ☐ NO

Modify Outlet Structure:  ☐ YES  ☐ NO  Add Aquatic Bench:  ☐ YES  ☐ NO

Grade Bottom of Facility:  ☐ YES  ☐ NO  Plant Native Vegetation:  ☐ YES  ☐ NO

Provide Additional Storage Volume:  ☐ YES  ☐ NO

Excavation / Raise the Embankment:  ☐ YES  ☐ NO
IMP / BMP SUMMARY

WQ_v (provided): 0.011  Re_v (provided): 0.001

Area Treated (ac): 0.19  Impervious Area Treated (ac): 0.14

Photographs

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>890</td>
<td>looking west</td>
</tr>
<tr>
<td>891</td>
<td>looking east</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments

Construct facility in bituminous or grass.

IMP size = 3,880 sq ft
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP ☑  SWM BMP Retrofit ☐  New SWM BMP ☐  Type (Sheets 4 & 5): 38

State Plane Coordinates of IMP / BMP Centroid:  X: _______  Y: _______

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1):  1, 2, 3, 4, 7, 16

Treatment Area Ownership:  ☐ Transportation ROW  ☐ Utility ROW  ☐ County  ☐ Other Government  ☑ Private
☐ Other

Infrastructure / Structures / Buildings Impacted:  ☑ YES  ☐ NO

Limited Impact to Adjacent Properties:  ☑ YES  ☐ NO

Area Accessible for Construction:  ☑ YES  ☐ NO

Area Accessible for Maintenance:  ☑ YES  ☐ NO

Limited Permitting Issues:  ☑ YES  ☐ NO

Jurisdictional Wetlands Impacted:  ☑ YES  ☐ NO

Forest Retention Area Impacted:  ☑ YES  ☐ NO

Conservation Easement Impacted:  ☐ YES  ☐ NO

Utilities Present:  ☐ None  ☑ Natural Gas  ☐ Electric  ☐ Telephone  ☐ Cable  ☐ Water  ☐ Sewer  ☐ Other

Utilities Impacted:  ☐ None  ☑ Natural Gas  ☑ Electric  ☐ Telephone  ☐ Cable  ☐ Water  ☐ Sewer  ☐ Other

Impacted Utilities:  ☐ Above Ground  ☑ Underground

Critical Area Impacted:  ☑ YES  ☐ NO

Mature / Specimen Trees Impacted:  ☑ YES  ☐ NO

Existing Landscaping Impacted:  ☑ YES  ☐ NO

Underdrain Needed:  ☑ YES  ☐ NO  Underdrains Can Discharge:  ☑ YES  ☐ NO

Soils are Suitable:  ☑ YES  ☐ NO  Ground Water Table Level Suitable:  ☑ YES  ☐ NO

Estimate IMP / BMP drainage area included on site:  0.28 ac  100%

Retrofit of Existing SWM BMP

SDI ID:  ______________  Add Forebay:  ☐ YES  ☐ NO

Modify Outlet Structure:  ☐ YES  ☐ NO  Add Aquatic Bench:  ☐ YES  ☐ NO

Grade Bottom of Facility:  ☐ YES  ☐ NO  Plant Native Vegetation:  ☐ YES  ☐ NO

Provide Additional Storage Volume:  ☐ YES  ☐ NO

Excavation / Raise the Embankment:  ☐ YES  ☐ NO

IMP / BMP ID: 12  Site ID: LHIC  Catchment ID: BB05
### IMP / BMP SUMMARY

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>WQ&lt;sub&gt;p&lt;/sub&gt; (provided)</td>
<td>0.018</td>
</tr>
<tr>
<td>Re&lt;sub&gt;p&lt;/sub&gt; (provided)</td>
<td>0.001</td>
</tr>
<tr>
<td>Area Treated (ac)</td>
<td>0.28</td>
</tr>
<tr>
<td>Impervious Area Treated (ac)</td>
<td>0.23</td>
</tr>
</tbody>
</table>

### Photographs

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>892</td>
<td>looking west</td>
</tr>
<tr>
<td>893</td>
<td>looking east</td>
</tr>
</tbody>
</table>

### Comments

- Construct facility in bituminous or grass.
- IMP treats 90% of the drainage area
- IMP size = 3,507 sq ft
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP ☑️  SWM BMP Retrofit ☐  New SWM BMP ☐  Type (Sheets 4 & 5): ☐ 41

State Plane Coordinates of IMP / BMP Centroid:
X: _______  Y: _______

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1):

Treatment Area Ownership: ☐ Transportation ROW  ☐ Utility ROW  ☐ County  ☐ Other Government  ☑️ Private

Infrastructure / Structures / Buildings Impacted: ☑️ YES ☑️ NO

Limited Impact to Adjacent Properties: ☑️ YES ☑️ NO

Area Accessible for Construction: ☑️ YES ☑️ NO

Area Accessible for Maintenance: ☑️ YES ☑️ NO

Limited Permitting Issues: ☑️ YES ☑️ NO

Jurisdictional Wetlands Impacted: ☑️ YES ☑️ NO

Forest Retention Area Impacted: ☑️ YES ☑️ NO

Conservation Easement Impacted: ☑️ YES ☑️ NO

Utilities Present: ☑️ None ☑️ Natural Gas ☑️ Electric ☑️ Telephone ☑️ Cable ☑️ Water ☑️ Sewer ☑️ Other

Utilities Impacted: ☑️ None ☑️ Natural Gas ☑️ Electric ☑️ Telephone ☑️ Cable ☑️ Water ☑️ Sewer ☑️ Other

Impacted Utilities: ☑️ Above Ground  ☑️ Underground

Critical Area Impacted: ☑️ YES ☑️ NO

Mature / Specimen Trees Impacted: ☑️ YES ☑️ NO

Existing Landscaping Impacted: ☑️ YES ☑️ NO

Underdrain Needed: ☑️ YES ☑️ NO  Underdrains Can Discharge: ☑️ YES ☑️ NO

Soils are Suitable: ☑️ YES ☑️ NO  Ground Water Table Level Suitable: ☑️ YES ☑️ NO

Estimate IMP / BMP drainage area included on site:

0.11 ac  100%

Retrofit of Existing SWM BMP

SDI ID: ____________  Add Forebay: ☑️ YES ☑️ NO

Modify Outlet Structure: ☑️ YES ☑️ NO  Add Aquatic Bench: ☑️ YES ☑️ NO

Grade Bottom of Facility: ☑️ YES ☑️ NO  Plant Native Vegetation: ☑️ YES ☑️ NO

Provide Additional Storage Volume: ☑️ YES ☑️ NO

Excavation / Raise the Embankment: ☑️ YES ☑️ NO
### IMP / BMP SUMMARY

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>WQ&lt;sub&gt;v&lt;/sub&gt; (provided):</td>
<td>0.008</td>
</tr>
<tr>
<td>Re&lt;sub&gt;v&lt;/sub&gt; (provided):</td>
<td>0.000</td>
</tr>
<tr>
<td>Area Treated (ac):</td>
<td>0.11</td>
</tr>
<tr>
<td>Impervious Area Treated (ac):</td>
<td>0.10</td>
</tr>
</tbody>
</table>

### Photographs

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>894</td>
<td>looking northeast</td>
</tr>
<tr>
<td>895</td>
<td>looking south</td>
</tr>
</tbody>
</table>

### Comments

There is little space available due to utilities and retaining wall.
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP [✓] SWM BMP Retrofit [ ] New SWM BMP [ ] Type (Sheets 4 & 5): [38]

State Plane Coordinates of IMP / BMP Centroid: X: [_____] Y: [_____]

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): [1, 2, 3, 4, 7, 16]

Treatment Area Ownership: [✓] Transportation ROW [ ] Utility ROW [ ] County [ ] Other Government [✓] Private

Infrastructure / Structures / Buildings Impacted: [✓] YES [ ] NO

Limited Impact to Adjacent Properties: [✓] YES [ ] NO

Area Accessible for Construction: [✓] YES [ ] NO

Area Accessible for Maintenance: [✓] YES [ ] NO

Limited Permitting Issues: [✓] YES [ ] NO

Jurisdictional Wetlands Impacted: [ ] YES [✓] NO

Forest Retention Area Impacted: [ ] YES [✓] NO

Conservation Easement Impacted: [ ] YES [✓] NO

Utilities Present: [ ] None [ ] Natural Gas [✓] Electric [ ] Telephone [ ] Cable [ ] Water [ ] Sewer [ ] Other

Utilities Impacted: [ ] None [ ] Natural Gas [✓] Electric [ ] Telephone [ ] Cable [ ] Water [ ] Sewer [ ] Other

Impacted Utilities: [ ] Above Ground [✓] Underground

Critical Area Impacted: [ ] YES [✓] NO

Mature / Specimen Trees Impacted: [ ] YES [✓] NO

Existing Landscaping Impacted: [✓] YES [ ] NO

Underdrain Needed: [ ] YES [✓] NO

Underdrains Can Discharge: [✓] YES [ ] NO

Soils are Suitable: [✓] YES [ ] NO

Ground Water Table Level Suitable: [✓] YES [ ] NO

Estimate IMP / BMP drainage area included on site: [0.08] ac [95%]

Retrofit of Existing SWM BMP

SDI ID: [_______] Add Forebay: [ ] YES [✓] NO

Modify Outlet Structure: [ ] YES [✓] NO Add Aquatic Bench: [✓] YES [ ] NO

Grade Bottom of Facility: [✓] YES [ ] NO Plant Native Vegetation: [ ] YES [✓] NO

Provide Additional Storage Volume: [ ] YES [✓] NO

Excavation / Raise the Embankment: [ ] YES [✓] NO
IMP / BMP SUMMARY

WQ_v (provided): 0.006
Re_v (provided): 0.000
Area Treated (ac): 0.09
Impervious Area Treated (ac): 0.07

Photographs

No. Description:
896 looking north
897 looking south

Comments
A speed bump will be used to direct flow. Runoff can be treated within existing grassed areas. If additional treatment area is needed, pavement can be removed and replaced with bioretention area.
IMP treats 89% of the drainage area
IMP size = 4,426 sq ft
UPPER PATUXENT RIVER WATERSHED RESTORATION ACTION STRATEGY (WRAS)
FORM 3 -- Opportunities and Constraints of Potential Management Practice

New LID IMP ☑  SWM BMP Retrofit ☐  New SWM BMP ☐  Type (Sheets 4 & 5): 38

State Plane Coordinates of IMP / BMP Centroid: X:  Y:  

Sketch Location of Footprint (with Approximate Dimensions) and Drainage Boundary on Site Map

Identify all Impairments Addressed by Recommendation (Sheet 1): 1, 2, 3, 4, 7, 16

Treatment Area Ownership: ☐ Transportation ROW  ☐ Utility ROW  ☐ County  ☐ Other Government  ☑ Private  ☐ Other

Infrastructure / Structures / Buildings Impacted: ☑ YES  ☐ NO

Limited Impact to Adjacent Properties: ☑ YES  ☐ NO

Area Accessible for Construction: ☑ YES  ☐ NO

Area Accessible for Maintenance: ☑ YES  ☐ NO

Limited Permitting Issues: ☑ YES  ☐ NO

Jurisdictional Wetlands Impacted:  ☐ YES  ☑ NO

Forest Retention Area Impacted:  ☐ YES  ☑ NO

Conservation Easement Impacted: ☐ YES  ☑ NO

Utilities Present:  ☐ None  ☑ Natural Gas  ☑ Electric  ☐ Telephone  ☐ Cable  ☐ Water  ☐ Sewer  ☐ Other

Utilities Impacted:  ☐ None  ☑ Natural Gas  ☑ Electric  ☐ Telephone  ☐ Cable  ☐ Water  ☐ Sewer  ☐ Other

Impacted Utilities:  ☐ Above Ground  ☑ Underground

Critical Area Impacted:  ☑ YES  ☐ NO

Mature / Specimen Trees Impacted:  ☑ YES  ☐ NO

Existing Landscaping Impacted:  ☑ YES  ☐ NO

Underdrain Needed:  ☐ YES  ☑ NO  Underdrains Can Discharge:  ☑ YES  ☐ NO

Soils are Suitable:  ☑ YES  ☐ NO  Ground Water Table Level Suitable:  ☑ YES  ☐ NO

Estimate IMP / BMP drainage area included on site:  ________ ac  95%

Retrofit of Existing SWM BMP

SDI ID:  ____________  Add Forebay:  ☐ YES  ☐ NO

Modify Outlet Structure:  ☐ YES  ☐ NO  Add Aquatic Bench:  ☐ YES  ☐ NO

Grade Bottom of Facility:  ☐ YES  ☐ NO  Plant Native Vegetation:  ☐ YES  ☐ NO

Provide Additional Storage Volume:  ☐ YES  ☐ NO

Excavation / Raise the Embankment:  ☐ YES  ☐ NO
IMP / BMP SUMMARY

WQv (provided): 0.024  Rev (provided): 0.001
Area Treated (ac): 0.35  Impervious Area Treated (ac): 0.30

Photographs

No. 898 Description: looking south
No. 899 Description: looking west
No. 900 Description: looking east
No. 901 Description: looking north
No. Description: 
No. Description: 
No. Description: 
No. Description: 

Comments

A speed bump will be used to direct flow. Runoff can be treated within existing grassed areas. If additional treatment area is needed, pavement can be removed and replaced with bioretention area.

IMP treats 51% of the drainage area
IMP size = 5,867 sq ft