

APPENDIX C.1: FIELD FORMS POND & NEW SWM BMP SITES

Restoration Site CATO-2018-FSND-0001



Rest
DRAINS
DISCONNECTED

EXISTING
CONCRETE
RESER
RESTORATION

DAMAGED - 1 SD INFLOWS - (unpaved?)
DITCH INFLOWS

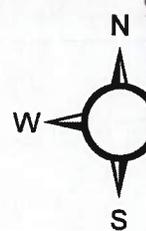
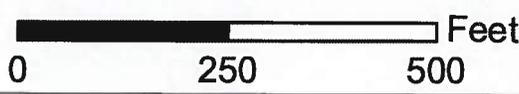
CONCRETE STAIRS
DITCH INFLOWS

Catoctin Creek Watershed Assessment



DITCH IS GOOD NEAR STABLE ZEPHYR

- ▲ Existing BMP
- SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- Parcel Boundaries
- Restoration Opp



OUTLET = 1/8"
CAP
OUTLET
GOOD
COLLAPTION

WATERSHED: CATU SUBWATERSHED: _____ UNIQUE SITE ID: CATU-2018-RSNO-0001

DATE: 5/24/18 ASSESSED BY: my JS PICTURES: _____

LAT: _____ LONG: _____

SITE DESCRIPTION

Name: _____
Address: _____

Ownership: Public Private Unknown Alban CAT
If Public, Government Jurisdiction: Local State DOT Other: _____

Proposed Retrofit Location:

Storage	On-Site
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Hotspot Operation
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> Small Parking Lot
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Individual Street
<input checked="" type="checkbox"/> Other: <u>Existing dry pond not recorded in remap GDE</u>	<input type="checkbox"/> Underground
<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Individual Rooftop
<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Impervious Area
<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Landscape / Hardscape
	<input type="checkbox"/> Other: _____

DRAINAGE AREA TO PROPOSED RETROFIT

Drainage Area = 3.36
Imperviousness = _____ %
Impervious Area = 2.31

Notes: _____

Drainage Area Land Use:

<input type="checkbox"/> Residential	<input type="checkbox"/> Institutional
<input type="checkbox"/> SFH (< 1 ac lots)	<input checked="" type="checkbox"/> Industrial
<input type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related
<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park
<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped
<input checked="" type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____

EXISTING STORMWATER MANAGEMENT

Existing Stormwater Practice: Yes No Possible

If Yes, Describe:
There is a damaged 12" CMP and three tiles that discharge to the field that is SW of the site, where a riser structure is present. Concrete riser has 8" orifice and 18" CPP. Small ash tree growing against riser. Riprap outfall channel is in good condition. Xcave inlet which is the result of sheetflow concentrating at lot and eroding a channel.

Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:

Proposed Treatment Option:

<input type="checkbox"/> Extended Detention	<input type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention
<input checked="" type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input type="checkbox"/> Other: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- create stabilized inflow channels from parking lot
 - Retrofit area in front of riser into a surface sand filter.

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe:

Access:

No Constraints

Constrained due to

- Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____
- possible.. need Plans*

Conflicts with Existing Utilities:

- None
 Unknown

Yes	Possible	
<input type="checkbox"/>	<input type="checkbox"/>	Sewer
<input type="checkbox"/>	<input type="checkbox"/>	Water
<input type="checkbox"/>	<input type="checkbox"/>	Gas
<input type="checkbox"/>	<input type="checkbox"/>	Cable
<input type="checkbox"/>	<input type="checkbox"/>	Electric
<input type="checkbox"/>	<input type="checkbox"/>	Electric to Streetlights
<input type="checkbox"/>	<input type="checkbox"/>	Overhead Wires
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____

Potential Permitting Factors:

- | | | |
|------------------------------|-----------------------------------|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|---|
| <input type="checkbox"/> Confirm property ownership | <input checked="" type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input type="checkbox"/> Confirm drainage area | <input checked="" type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input type="checkbox"/> Confirm volume computations | <input checked="" type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

Unique Site ID: _____

Restoration Site CATO-2018-FSND-0003



28" Comp

3-24" RCP

SURFACE 200F DRAWS

INLET FROM DITCH ERADING

LOOKS LIKE NEW INLET

ROOF DRAWS UNDER GREEN

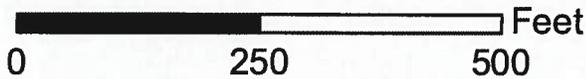
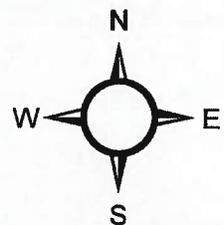
PIPES FROM DRAWS

POTENTIAL BMP LOCATION

Catoctin Creek Watershed Assessment



- ▲ Existing BMP
- ⊙ SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- ▭ Parcel Boundaries
- Restoration Opp



WATERSHED: <u>CAT</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>CAT0-2018-PCVD-0003</u>	
DATE: <u>5/24/18</u>		ASSESSED BY: <u>MV, JS</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Unknown <u>Alban CAT</u>					
If Public, Government Jurisdiction: <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> DOT <input type="checkbox"/> Other: _____					
Proposed Retrofit Location:					
Storage		On-Site			
<input type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input checked="" type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input checked="" type="checkbox"/> Other: <u>In grassy area next to MD-17</u>		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = _____			Drainage Area Land Use:		
Imperviousness = _____ %			<input type="checkbox"/> Residential		
Impervious Area = _____			<input type="checkbox"/> SFH (< 1 ac lots)		
Notes:			<input type="checkbox"/> SFH (> 1 ac lots)		
			<input type="checkbox"/> Townhouses		
			<input type="checkbox"/> Multi-Family		
			<input checked="" type="checkbox"/> Commercial		
			<input type="checkbox"/> Institutional		
			<input checked="" type="checkbox"/> Industrial		
			<input type="checkbox"/> Transport-Related		
			<input type="checkbox"/> Park		
			<input type="checkbox"/> Undeveloped		
			<input type="checkbox"/> Other: _____		
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Possible					
If Yes, Describe:					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
<u>Runoff from front parking lot area and portion of MD-17 shedflap to grass area located on east side of Alban CAT fence.</u>					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention	<input type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention		
<input checked="" type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input type="checkbox"/> Other: _____		

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- Construct a new sand filter in grassy area along MO-17. Will either need to add curbing to lot or new inlet(s)/pipes to direct runoff to proposed sand filter.

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe:

Access:

- No Constraints
 Constrained due to
 Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None
 Unknown

Yes	Possible	
<input type="checkbox"/>	<input type="checkbox"/>	Sewer
<input type="checkbox"/>	<input type="checkbox"/>	Water
<input type="checkbox"/>	<input type="checkbox"/>	Gas
<input type="checkbox"/>	<input type="checkbox"/>	Cable
<input type="checkbox"/>	<input type="checkbox"/>	Electric
<input type="checkbox"/>	<input type="checkbox"/>	Electric to Streetlights
<input type="checkbox"/>	<input type="checkbox"/>	Overhead Wires
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____

Potential Permitting Factors:

- | | | |
|------------------------------|-----------------------------------|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|--|
| <input checked="" type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area | <input checked="" type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input type="checkbox"/> Confirm volume computations | <input checked="" type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

Unique Site ID: _____

Restoration Site CATO-2018-MSGW-0002



Hydrograph # 2220037

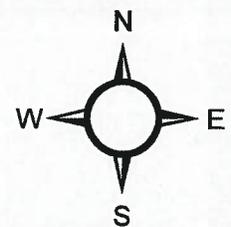
*Quality
EPA 2010*

*POTENTIAL
100% WHITE
W/ PVC
W/ FLOW*

Catoctin Creek Watershed Assessment



- ★ Restoration Opportunity
- Streams
- ▭ Parcel Boundaries



WATERSHED: CATD		SUBWATERSHED:		UNIQUE SITE ID: CATD-2018-MSGW-0002	
DATE: 5/1/18		ASSESSED BY: MV/JS		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: CATD-2018-MSGW-0002					
Address: WILLOW TREE DR & FELDSPAR RD					
Ownership: <input checked="" type="checkbox"/> Public <input type="checkbox"/> Private <input type="checkbox"/> Unknown					
If Public, Government Jurisdiction: <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> DOT <input type="checkbox"/> Other:					
Proposed Retrofit Location:					
Storage			On-Site		
<input type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> Below Outfall	<input checked="" type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input type="checkbox"/> Other:		<input type="checkbox"/> Underground	<input type="checkbox"/> Other:		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = _____			Drainage Area Land Use:		
Imperviousness = _____ %			<input type="checkbox"/> Residential	<input type="checkbox"/> Institutional	
Impervious Area = _____			<input checked="" type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial	
Notes: TBD			<input type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related	
			<input type="checkbox"/> Townhouses	<input checked="" type="checkbox"/> Park	
			<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped	
			<input type="checkbox"/> Commercial	<input type="checkbox"/> Other:	
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Possible					
If Yes, Describe:					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
AREA INVESTIGATED IS A COUNTY ATHLETIC FIELD IN RESIDENTIAL NEIGHBORHOOD. CONVEYANCE THROUGH NEIGHBORHOOD IS GRASS SWALES. AREA HAS SOME STEEP SLOPES. UNMAPPED STREAM & MAPPED STREAM BORDER 2 SIDES OF FIELD. BOTH HAVE SIGNIFICANT EROSION. NOT TOO MANY OPP. FOR BMP'S UNLESS COUNTY IS WILLING TO LOSE ATHLETIC FIELD					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention	<input type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention		
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input checked="" type="checkbox"/> Other: STREAM RESTORATION		

CATD-2018-
Unique Site ID: MSGW-0002

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

EVALUATE OPPORTUNITY FOR STREAM RESTORATION

SITE CONSTRAINTS

Adjacent Land Use:

- Residential
- Commercial
- Institutional
- Industrial
- Transport-Related
- Park
- Undeveloped
- Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe: COUNTY ATHLETIC FIELDS

Access:

No Constraints
Constrained due to

- Slope
- Utilities
- Structures
- Other: _____
- Space
- Tree Impacts
- Property Ownership

Conflicts with Existing Utilities:

- None
- Unknown

- | Yes | Possible | |
|--------------------------|-------------------------------------|--------------------------|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Sewer |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Water |
| <input type="checkbox"/> | <input type="checkbox"/> | Gas |
| <input type="checkbox"/> | <input type="checkbox"/> | Cable |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric to Streetlights |
| <input type="checkbox"/> | <input type="checkbox"/> | Overhead Wires |
| <input type="checkbox"/> | <input type="checkbox"/> | Other: _____ |

Potential Permitting Factors:

- | | | |
|------------------------------|--|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to a Stream | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|--|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area impervious cover | <input checked="" type="checkbox"/> Obtain detailed topography |
| <input checked="" type="checkbox"/> Confirm volume computations | <input checked="" type="checkbox"/> Obtain utility mapping |
| <input checked="" type="checkbox"/> Complete concept sketch | <input checked="" type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

CATD-2018-

Unique Site ID: MSGW-0002

FSVP-0004

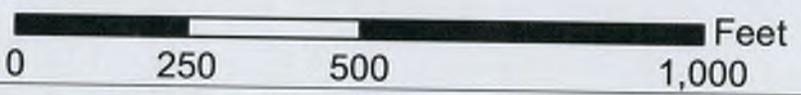
Restoration Site CATO-2018-MSGW-0001



Catoctin Creek Watershed Assessment



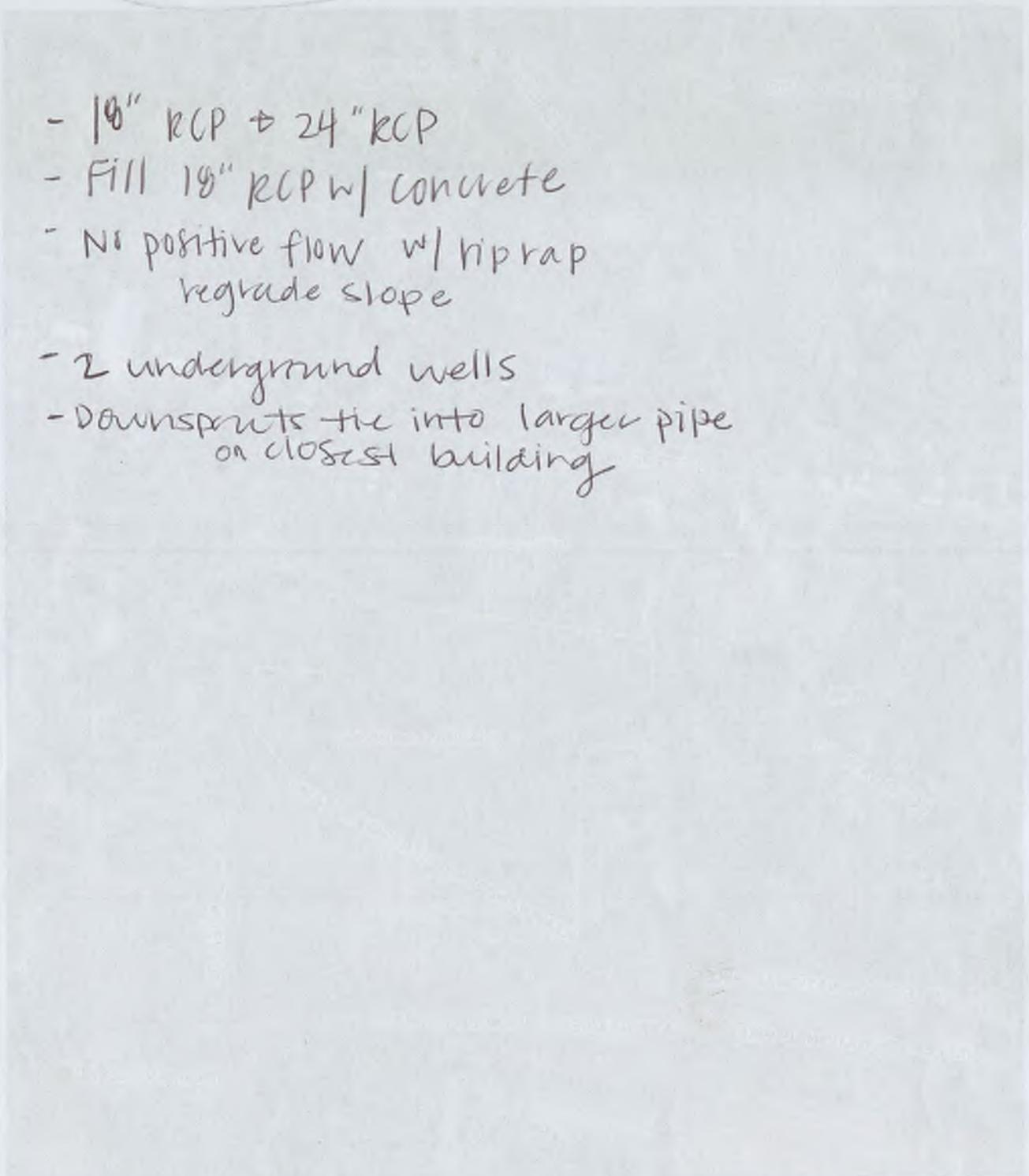
- ★ Restoration Opportunity
- Streams
- Parcel Boundaries



0000-0000

Restoration Site CATO-2018 MSGW-0001

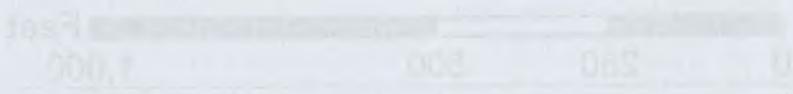
- 18" RCP \rightarrow 24" RCP
- Fill 18" RCP w/ concrete
- No positive flow w/ riprap
regrade slope
- 2 underground wells
- Downspouts tie into larger pipe
on closest building



Catoctin Creek Watershed Assessment



* Restoration Opportunity
— Channel
— Point Boundary



WATERSHED: <u>Catoctin</u>		SUBWATERSHED: <u>Catoctin</u>		UNIQUE SITE ID: <u>CAT0-2018-0004</u>	
DATE: <u>6/5/18</u>		ASSESSED BY: <u>M/VH</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Unknown					
If Public, Government Jurisdiction: <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> DOT <input type="checkbox"/> Other: _____					
Proposed Retrofit Location:					
Storage			On-Site		
<input type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input checked="" type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>~ 7 ac. for outfall</u>			Drainage Area Land Use:		
Imperviousness = <u>30-50%</u> <u>~ 14 ac. imp.</u>			<input checked="" type="checkbox"/> Residential	<input checked="" type="checkbox"/> Institutional	
Impervious Area = <u>3-5 ac.</u> <u>2-3 ac. imp.</u>			<input checked="" type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial	
Notes:			<input type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related	
			<input checked="" type="checkbox"/> Townhouses	<input type="checkbox"/> Park	
			<input checked="" type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped	
			<input checked="" type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____	
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Possible					
If Yes, Describe:					
next to old RCP pipe					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance: <u>partly graded</u>					
<u>new SHA^{24"} concrete ent section outfalls into RCP pipe ditch</u>					
<u>on private property. Flows D/S to ephemeral channel</u>					
<u>that crosses under fence and driveway on separate property</u>					
<u>channel may be intermittent before crossing into SHA ROW.</u>					
<u>Erosion in some areas.</u>					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention	<input type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention		
<input checked="" type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input checked="" type="checkbox"/> Other: <u>RSC</u>		

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- Can install surface sand filter w/ outfall if there is enough space. Otherwise, look into RSC potential in downstream channel.

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe: Project will involve several private property owners.

Access:

- No Constraints
 Constrained due to
 Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None
 Unknown

Yes	Possible	
<input type="checkbox"/>	<input type="checkbox"/>	Sewer
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Water → wells in vicinity
<input type="checkbox"/>	<input type="checkbox"/>	Gas
<input type="checkbox"/>	<input type="checkbox"/>	Cable
<input type="checkbox"/>	<input type="checkbox"/>	Electric
<input type="checkbox"/>	<input type="checkbox"/>	Electric to Streetlights
<input type="checkbox"/>	<input type="checkbox"/>	Overhead Wires
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____

Potential Permitting Factors:

- | | | |
|------------------------------|--|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to a Stream | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Floodplain Fill | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

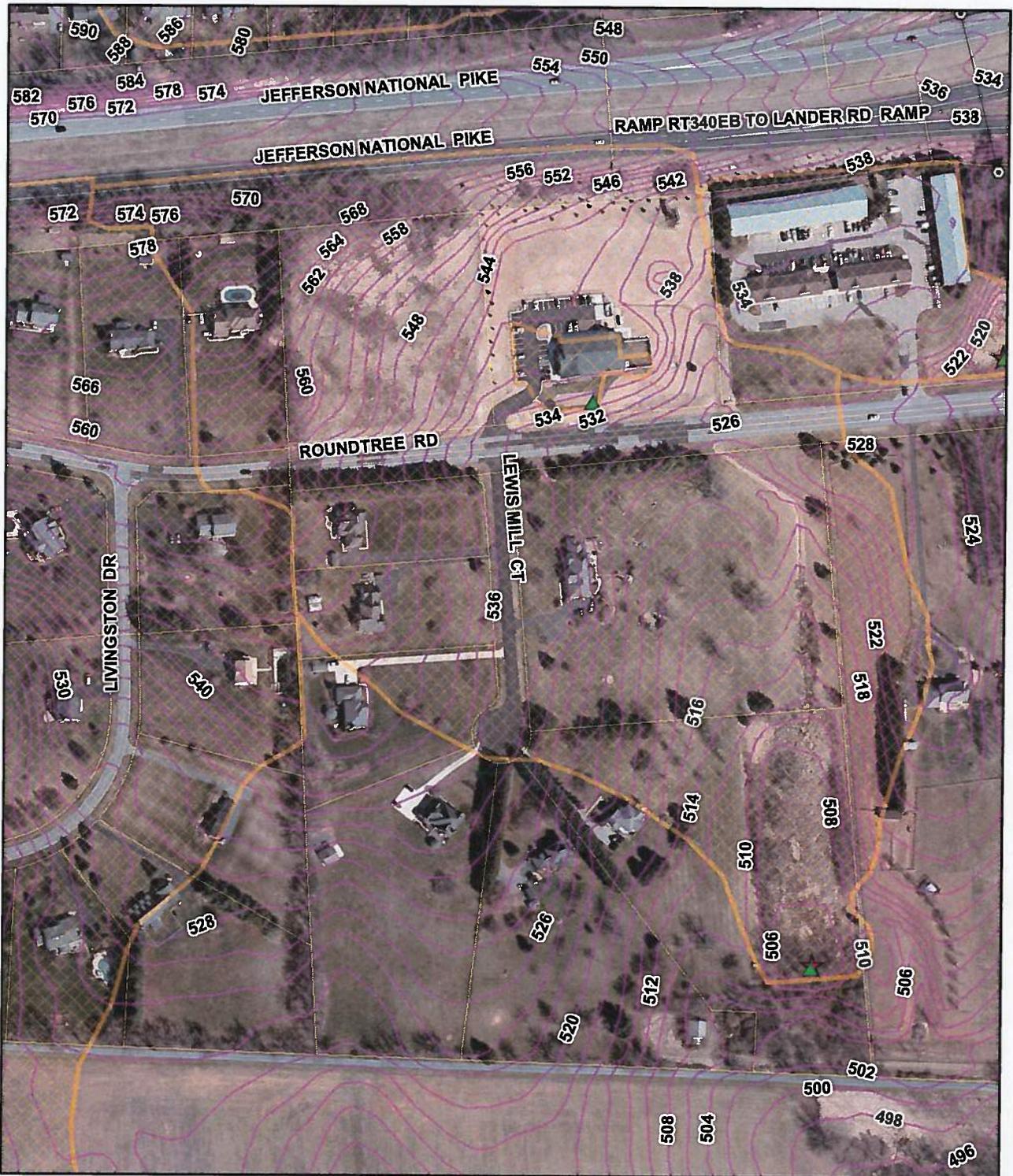
Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input type="checkbox"/> Confirm volume computations | <input checked="" type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input checked="" type="checkbox"/> Confirm soil types |

Unique Site ID: _____

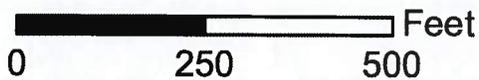
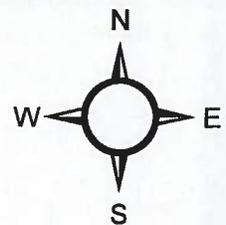
Restoration Site 25



Catoctin Creek Watershed Assessment



- ▲ Existing BMP
- ⊙ SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- ▭ Parcel Boundaries
- Restoration Opp



WATERSHED: <u>CATO</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>25</u>	
DATE: <u>6/5/18</u>		ASSESSED BY: <u>MV, VH</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership:		<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Unknown	
If Public, Government Jurisdiction:		<input type="checkbox"/> Local	<input type="checkbox"/> State	<input type="checkbox"/> DOT	<input type="checkbox"/> Other: _____
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input checked="" type="checkbox"/> Other: <u>Inflow channel</u>		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>25.54 ac</u>		Drainage Area Land Use:			
Imperviousness = _____ %		<input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Institutional		
Impervious Area = <u>2.60</u>		<input type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial		
Notes: <u>NE portion of DA needs to be converted</u>		<input checked="" type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related		
		<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park		
		<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped		
		<input checked="" type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____		
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice:		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Possible	
If Yes, Describe:					
<p><u>Existing dry pond with two inflows/sources of drainage</u></p> <ul style="list-style-type: none"> <u>vegetated ditch that had flow during time of inspection</u> <u>sheetflow from lawn mill (E. neighborhood swales and CMP pipe</u> <p><u>Central structure is a 15" CMP pipe that was actively draining the facility during the visit. - Has 15' E.M. Spillway on East side of facility</u></p>					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
<p>_____</p> <p>_____</p> <p>_____</p>					
Proposed Treatment Options					
<input type="checkbox"/> Extended Detention	<input checked="" type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention		
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input checked="" type="checkbox"/> Other: <u>RSC</u>		

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- Two retrofit options:
 o Retrofit inflow ditch into an RSC
 o Retrofit DP into a WP
 → Add forebay
 → Install riser that will support a permanent pool

* Both options will result in significant environmental impacts, but the pond retrofit will have more impacts/permitting issues.

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: Horse Pasture

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe:

Access:

No Constraints

Constrained due to

- Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

None

Unknown

Yes

Possible

- | | | |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Sewer |
| <input type="checkbox"/> | <input type="checkbox"/> | Water |
| <input type="checkbox"/> | <input type="checkbox"/> | Gas |
| <input type="checkbox"/> | <input type="checkbox"/> | Cable |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric to Streetlights |
| <input type="checkbox"/> | <input type="checkbox"/> | Overhead Wires |
| <input type="checkbox"/> | <input type="checkbox"/> | Other: _____ |

Potential Permitting Factors:

Dam Safety Permits Necessary

Probable Not Probable

Impacts to Wetlands

Probable Not Probable

Impacts to a Stream

Probable Not Probable

Floodplain Fill

Probable Not Probable

Impacts to Forests

Probable Not Probable

Impacts to Specimen Trees

Probable Not Probable

How many? _____

Approx. DBH _____

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|--|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input checked="" type="checkbox"/> Confirm volume computations | <input checked="" type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input checked="" type="checkbox"/> Confirm soil types |

Unique Site ID: _____

Restoration Site 115 and 29

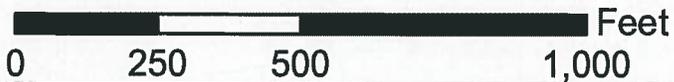
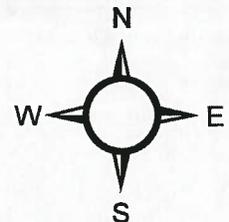


LOOK @ DTCH LINE ALONG BROOK & UNDER OLD MIDDLE TOWN RD
 WE TREAT THIS SERVICE LINE (PART OF OLD STUBS FROM DI SCARBE OFE DT SCARBE'S LD)

Catoctin Creek Watershed Assessment

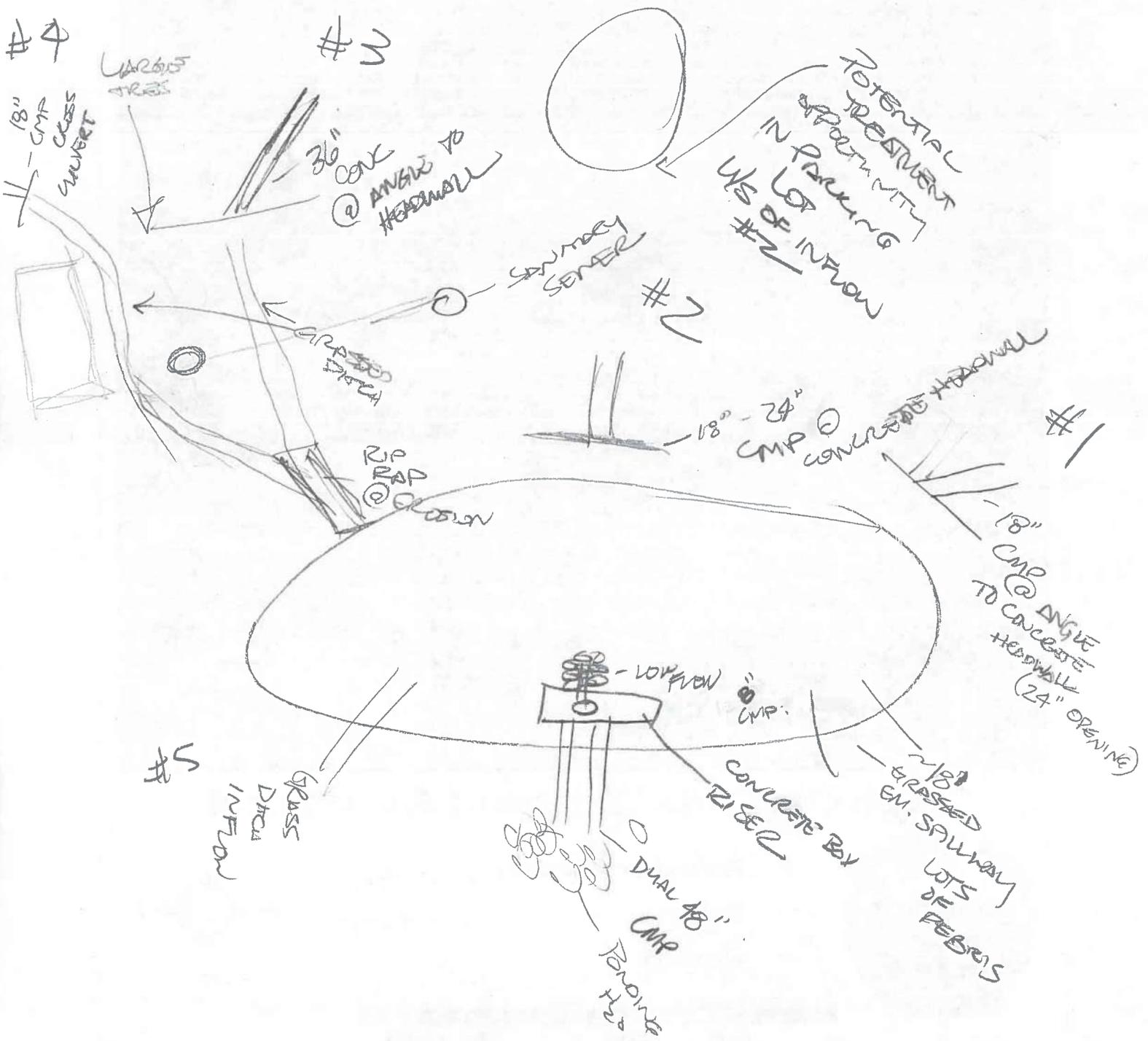


- ★ Restoration Opportunity
- Pipes
- Streams
- ▲ Structures
- Parcels



#29

DUAL 48" CMP DITCH
RISK - MISSING MANHOLE COVER



WATERSHED: <u>CATD</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>29</u>	
DATE: <u>5/1/18</u>		ASSESSED BY: <u>J/MV</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: <u>BM 29</u>					
Address: <u>CHAMPLAINE DR JEFFERSON MP</u>					
Ownership:		<input type="checkbox"/> Public	<input type="checkbox"/> Private	<input type="checkbox"/> Unknown	
If Public, Government Jurisdiction:		<input type="checkbox"/> Local	<input type="checkbox"/> State	<input type="checkbox"/> DOT	<input type="checkbox"/> Other: _____
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = _____		Drainage Area Land Use:			
Imperviousness = _____ %		<input type="checkbox"/> Residential	<input type="checkbox"/> Institutional		
Impervious Area = _____		<input checked="" type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial		
Notes:		<input type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related		
		<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park		
		<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped		
		<input type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____		
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice:		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Possible	
If Yes, Describe: <u>EXISTING DRY POND W/ CONCRETE BOX LID (SEE FIELD NOTES)</u> <u>5 INFLOWS</u>					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance: <u>GIS DA APPEARS CORRECT</u> <u>SOME EROSION @ VARIOUS INFLOWS</u> <u>STANDING WATER @ OUTFALL FROM TWIN 48"</u> <u>PIPES</u>					
Proposed Treatment Option:					
<input checked="" type="checkbox"/> Extended Detention	<input checked="" type="checkbox"/> Wet Pond	<input checked="" type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention		
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input type="checkbox"/> Other: _____		

Unique Site ID: 29

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

AMPLE SPACE TO ADD FOREBAYS & WET POOL
 LOOK @ POSSIBILITY OF DIVERTING OUTFLOW
 AROUND BMP 115 JUST DOWNSTREAM.

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe:

Access:

No Constraints

Constrained due to

- Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None
 Unknown
- | Yes | Possible | |
|-------------------------------------|--------------------------|--------------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Sewer |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Water |
| <input type="checkbox"/> | <input type="checkbox"/> | Gas |
| <input type="checkbox"/> | <input type="checkbox"/> | Cable |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric to Streetlights |
| <input type="checkbox"/> | <input type="checkbox"/> | Overhead Wires |
| <input type="checkbox"/> | <input type="checkbox"/> | Other: _____ |

Potential Permitting Factors:

- | | | |
|------------------------------|-----------------------------------|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

Other factors: _____

DID NOT
 → HAVE
 PLANS @
 TIME
 OF VISIT.
 WILL HAVE
 TO RE-EVALUATE
 WHEN PLANS ARE
 AVAILABLE

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|---|
| <input type="checkbox"/> Confirm property ownership | <input checked="" type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input checked="" type="checkbox"/> Obtain detailed topography |
| <input checked="" type="checkbox"/> Confirm volume computations | <input checked="" type="checkbox"/> Obtain utility mapping |
| <input checked="" type="checkbox"/> Complete concept sketch | <input checked="" type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input checked="" type="checkbox"/> Confirm soil types |

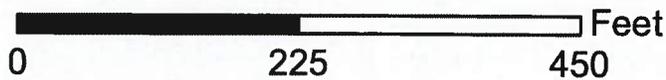
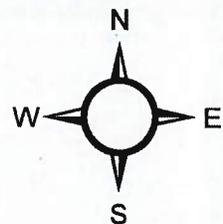
Restoration Site 31



Catoctin Creek Watershed Assessment



- Existing BMP
- BMP DA
- SW Structure
- Parcel Boundaries
- Restoration Opp
- Restoration Opp



WATERSHED: <u>CAU</u>		SUBWATERSHED: _____		UNIQUE SITE ID: <u>31</u>	
DATE: <u>5/24/18</u>		ASSESSED BY: <u>MV,JS</u>		PICTURES: _____	
LAT: _____			LONG: _____		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership:		<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Unknown	<u>Golf course</u>
If Public, Government Jurisdiction:		<input type="checkbox"/> Local	<input type="checkbox"/> State	<input type="checkbox"/> DOT	<input type="checkbox"/> Other: _____
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = _____			Drainage Area Land Use:		
Imperviousness = _____ %			<input type="checkbox"/> Residential	<input type="checkbox"/> Institutional	
Impervious Area = _____			<input type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial	
Notes: <u>GIS DA appears to be incorrect.</u>			<input type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related	
			<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park	
			<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped	
			<input type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Other: <u>Golf course parking lot</u>	
			EXISTING STORMWATER MANAGEMENT		
Existing Stormwater Practice:		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Possible	
If Yes, Describe:					
<u>Bioretention</u>					
<u>- one inflow -> 10" PVC pipe that was not visible during inspection. A flow splitter is present at manhole just upstream of inflow pipe. overflow exits via 18" ALCCMP, 11'x13' plunge pool at inlet pipe</u>					
<u>- No outfall or underdrain appear to be present</u>					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention	<input type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention	<u>?</u>	
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input checked="" type="checkbox"/> Other:	_____	

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

*- need to check camps to see if facility is already providing
" of treatment.*

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: *Golf Course*

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe: *need to consider aesthetics of
Golf course*

Access:

No Constraints

Constrained due to

- Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None
 Unknown

Yes	Possible	
<input type="checkbox"/>	<input type="checkbox"/>	Sewer
<input type="checkbox"/>	<input type="checkbox"/>	Water
<input type="checkbox"/>	<input type="checkbox"/>	Gas
<input type="checkbox"/>	<input type="checkbox"/>	Cable
<input type="checkbox"/>	<input type="checkbox"/>	Electric
<input type="checkbox"/>	<input type="checkbox"/>	Electric to Streetlights
<input type="checkbox"/>	<input type="checkbox"/>	Overhead Wires
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____

Potential Permitting Factors:

- | | | |
|------------------------------|-----------------------------------|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |

How many? _____
Approx. DBH _____

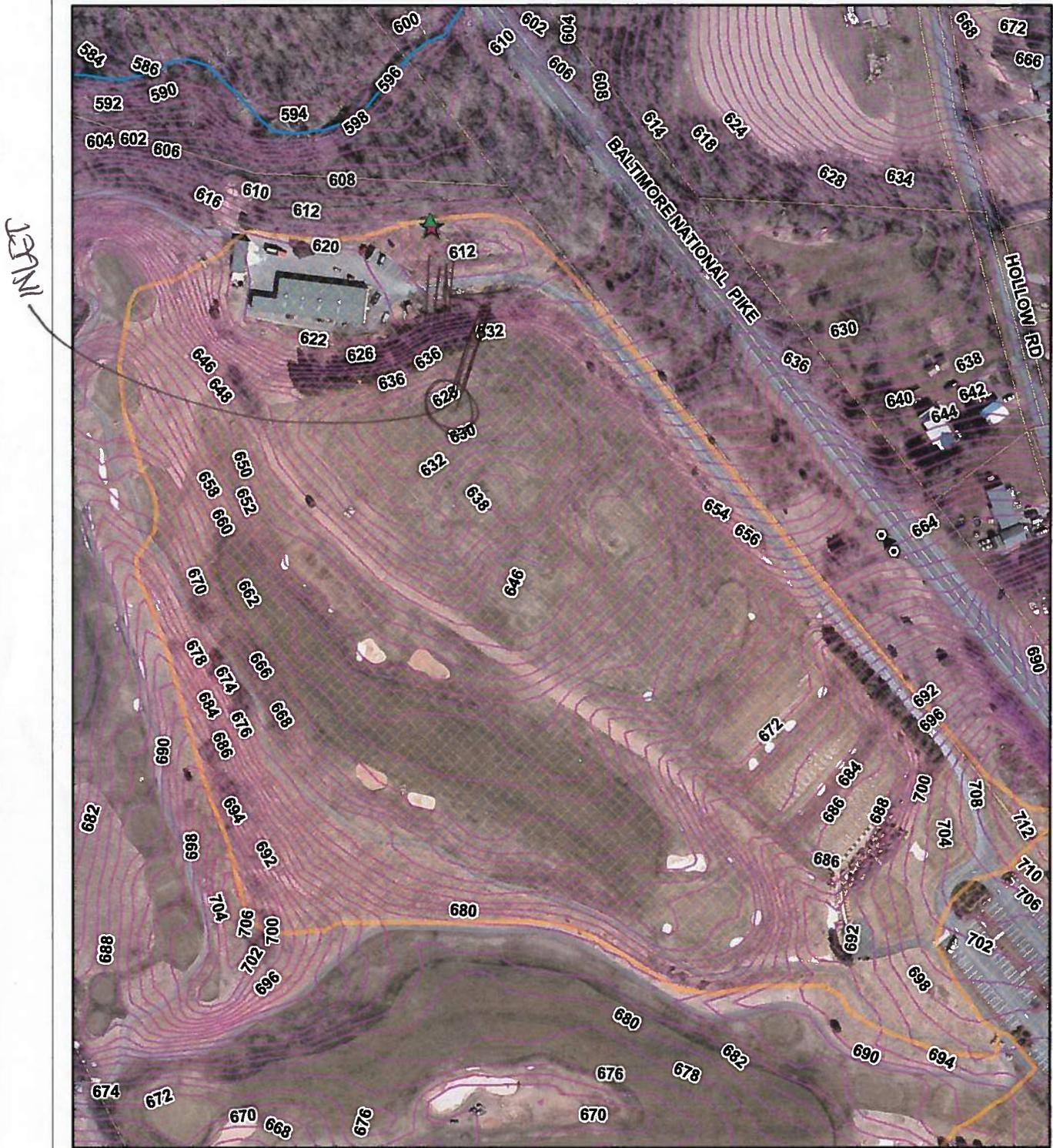
Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input checked="" type="checkbox"/> Confirm volume computations | <input type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

Unique Site ID: _____

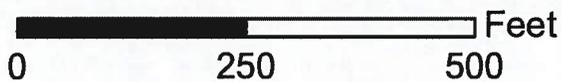
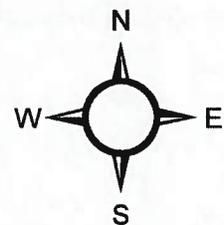
Restoration Site 33



Catoctin Creek Watershed Assessment



- ▲ Existing BMP
- SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- Parcel Boundaries
- Restoration Opp



WATERSHED: <u>CATO</u>	SUBWATERSHED:	UNIQUE SITE ID: <u>33</u>
DATE: <u>5/24/18</u>	ASSESSED BY: <u>MV, JS</u>	PICTURES:
LAT:	LONG:	
SITE DESCRIPTION		
Name: _____		
Address: _____		
Ownership: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Unknown <u>Golf course</u>		
If Public, Government Jurisdiction: <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> DOT <input type="checkbox"/> Other: _____		
Proposed Retrofit Location:		
Storage		
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	
<input type="checkbox"/> Other: _____		
On-Site		
<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop	
<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area	
<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape	
<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____	
DRAINAGE AREA TO PROPOSED RETROFIT		
Drainage Area = <u>21.66 ac.</u>	Drainage Area Land Use:	
Imperviousness = _____ %	<input type="checkbox"/> Residential	<input type="checkbox"/> Institutional
Impervious Area = <u>1.59 ac.</u>	<input type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial
	<input type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related
	<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park
	<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped
	<input type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____
Notes: <u>Drainage area appears to include the entire driving range.</u>		
EXISTING STORMWATER MANAGEMENT		
Existing Stormwater Practice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possible		
If Yes, Describe:		
<u>Extended Detention Dry Pond</u>		
<u>-Two inflows, one drains maintenance parking lot/building via C&G inlet, one drains driving range via two CPPs, and other is a ditch that drains driveway.</u>		
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:		
Proposed Treatment Option:		
<input type="checkbox"/> Extended Detention	<input type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale
		<input checked="" type="checkbox"/> Bioretention
		<input type="checkbox"/> Other: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- Construct bioretention at inflow that drains maintenance parking lot and building. Bioretention will provide WR treatment for ~ 1 - 1.5 acre DA and then discharge to existing pond that will continue to provide quantity treatment.

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: Golf course

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe:

Access:

No Constraints

Constrained due to

- Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None
 Unknown

- | Yes | Possible | |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Sewer |
| <input type="checkbox"/> | <input type="checkbox"/> | Water |
| <input type="checkbox"/> | <input type="checkbox"/> | Gas |
| <input type="checkbox"/> | <input type="checkbox"/> | Cable |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric to Streetlights |
| <input type="checkbox"/> | <input type="checkbox"/> | Overhead Wires |
| <input type="checkbox"/> | <input type="checkbox"/> | Other: _____ |

Potential Permitting Factors:

- | | | |
|------------------------------|--|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input type="checkbox"/> Confirm volume computations | <input type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

Unique Site ID: _____

Restoration Site 115 and 29

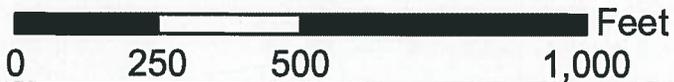
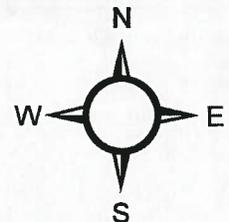


LOOK @ DTCH LINE ALONG BROOK & UNDER OLD MIDDLE TOWN RD
 WE TREAT THIS SERVICE LINE (PART OF OLD STUBS FROM DI SCARBE OFE DT SCARBE'S LD)

Catoctin Creek Watershed Assessment

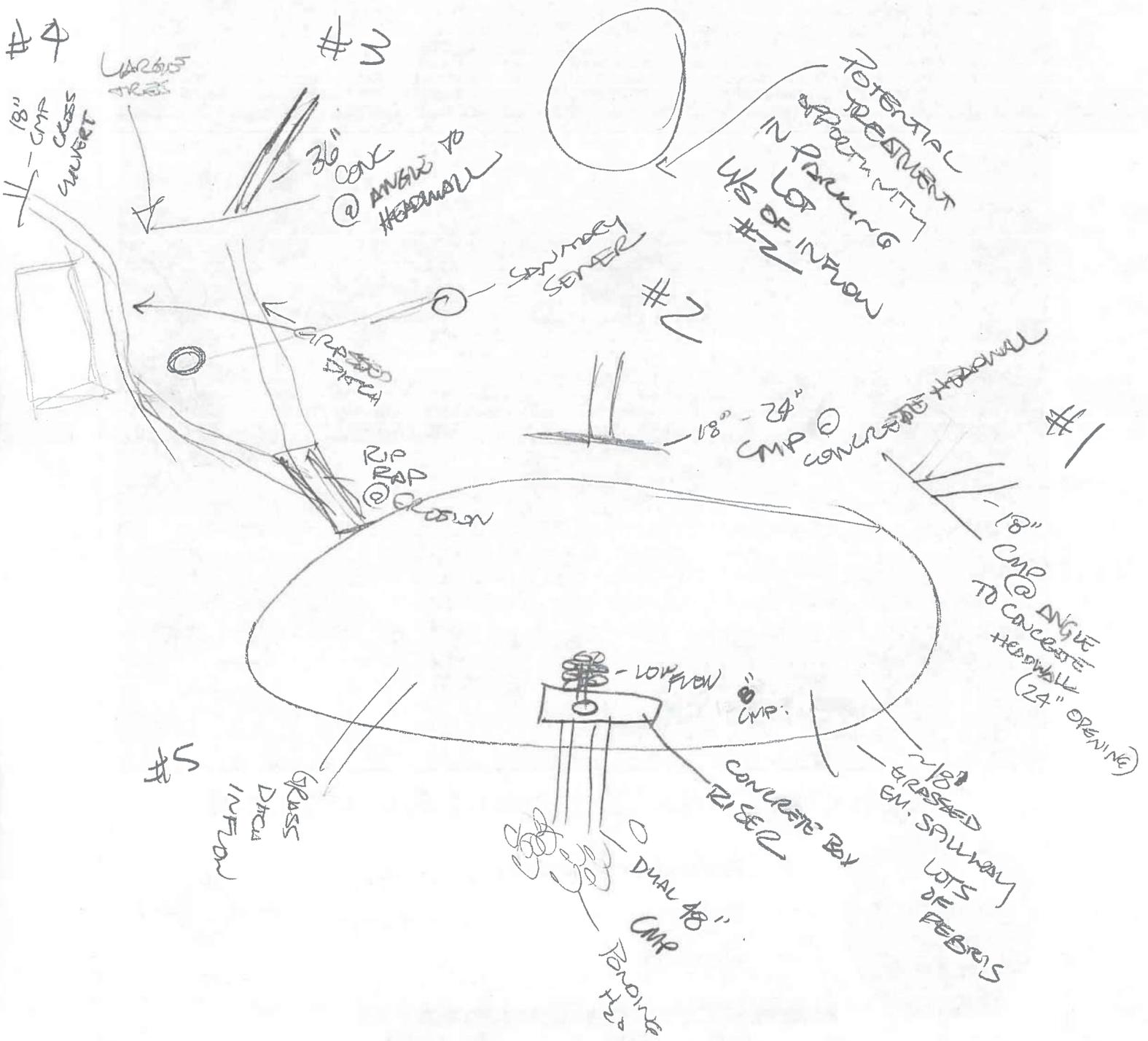


- ★ Restoration Opportunity
- Pipes
- Streams
- ▲ Structures
- Parcels



#29

DUAL 48" CMP DITCH
RISK - MISSING MANHOLE COVER



WATERSHED: <u>CATO</u>	SUBWATERSHED:	UNIQUE SITE ID: <u>115</u>			
DATE: <u>5/1/18</u>	ASSESSED BY: <u>JS/MV</u>	PICTURES:			
LAT:	LONG:				
SITE DESCRIPTION					
Name: <u>BRIERCREST SWM POND - MAINTAINED BY CLARET PROPERTIES</u>					
Address: <u>SHADYWOOD DR JEFFERSON</u>					
Ownership: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Unknown <u>HOA</u> If Public, Government Jurisdiction: <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> DOT <input type="checkbox"/> Other: _____					
Proposed Retrofit Location:					
<table style="width:100%; border:none;"> <tr> <td style="width:33%; vertical-align: top;"> Storage <input checked="" type="checkbox"/> Existing Pond <input type="checkbox"/> Above Roadway Culvert <input type="checkbox"/> Below Outfall <input type="checkbox"/> In Conveyance System <input type="checkbox"/> In Road ROW <input type="checkbox"/> Near Large Parking Lot <input type="checkbox"/> Other: _____ </td> <td style="width:33%; vertical-align: top;"> On-Site <input type="checkbox"/> Hotspot Operation <input type="checkbox"/> Individual Rooftop <input type="checkbox"/> Small Parking Lot <input type="checkbox"/> Small Impervious Area <input type="checkbox"/> Individual Street <input type="checkbox"/> Landscape / Hardscape <input type="checkbox"/> Underground <input type="checkbox"/> Other: _____ </td> <td style="width:33%;"></td> </tr> </table>			Storage <input checked="" type="checkbox"/> Existing Pond <input type="checkbox"/> Above Roadway Culvert <input type="checkbox"/> Below Outfall <input type="checkbox"/> In Conveyance System <input type="checkbox"/> In Road ROW <input type="checkbox"/> Near Large Parking Lot <input type="checkbox"/> Other: _____	On-Site <input type="checkbox"/> Hotspot Operation <input type="checkbox"/> Individual Rooftop <input type="checkbox"/> Small Parking Lot <input type="checkbox"/> Small Impervious Area <input type="checkbox"/> Individual Street <input type="checkbox"/> Landscape / Hardscape <input type="checkbox"/> Underground <input type="checkbox"/> Other: _____	
Storage <input checked="" type="checkbox"/> Existing Pond <input type="checkbox"/> Above Roadway Culvert <input type="checkbox"/> Below Outfall <input type="checkbox"/> In Conveyance System <input type="checkbox"/> In Road ROW <input type="checkbox"/> Near Large Parking Lot <input type="checkbox"/> Other: _____	On-Site <input type="checkbox"/> Hotspot Operation <input type="checkbox"/> Individual Rooftop <input type="checkbox"/> Small Parking Lot <input type="checkbox"/> Small Impervious Area <input type="checkbox"/> Individual Street <input type="checkbox"/> Landscape / Hardscape <input type="checkbox"/> Underground <input type="checkbox"/> Other: _____				
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = _____ Imperviousness = _____ % Impervious Area = _____	Drainage Area Land Use: <input type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> SFH (< 1 ac lots) <input type="checkbox"/> Industrial <input type="checkbox"/> SFH (> 1 ac lots) <input type="checkbox"/> Transport-Related <input type="checkbox"/> Townhouses <input type="checkbox"/> Park <input checked="" type="checkbox"/> Multi-Family <input type="checkbox"/> Undeveloped <input type="checkbox"/> Commercial <input type="checkbox"/> Other: _____				
Notes: <u>GIS DA APPEARS CORRECT</u>					
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possible If Yes, Describe: <u>EXISTING DRY POND W/ CONCRETE WEIR. WEIR HAS BEEN "RETROFITTED" W/ BOARD (2 1/2 FT HIGH), 36" CMP CONVEYS OUTFLOW BENEATH SHADYWOOD - EROSION DKS. PO -> LOGS NET, 4 INFLOWS - SEE FIELD NOTES ON PLAN SHEET</u>					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance: <u>GIS DA CORRECT</u> <u>- AREA OF EROSION @ INFLOW # 2 (SEE FIELD NOTES ON PLAN SHEET)</u>					
Proposed Treatment Option:					
<input checked="" type="checkbox"/> Extended Detention <input checked="" type="checkbox"/> Wet Pond <input type="checkbox"/> Created Wetland <input type="checkbox"/> Bioretention <input type="checkbox"/> Filtering Practice <input type="checkbox"/> Infiltration <input type="checkbox"/> Swale <input type="checkbox"/> Other: _____					

Unique Site ID: 115

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

EVALUATE OPPORTUNITY TO TREAT BLEED DOWNSTREAM
 EVALUATE OPP TO DIRECT DRAINAGE FROM U/S POND

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe: _____

Access:

No Constraints

Constrained due to

- Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None
 Unknown

Yes

Possible

- Sewer
 Water
 Gas
 Cable
 Electric
 Electric to Streetlights
 Overhead Wires
 Other: _____

SANITARY SEWER ADJACENT TO FACILITY TO NORTH (RAINS E/W)

Potential Permitting Factors:

Dam Safety Permits Necessary

Impacts to Wetlands

Impacts to a Stream

Floodplain Fill

Impacts to Forests

Impacts to Specimen Trees

How many? _____

Approx. DBH _____

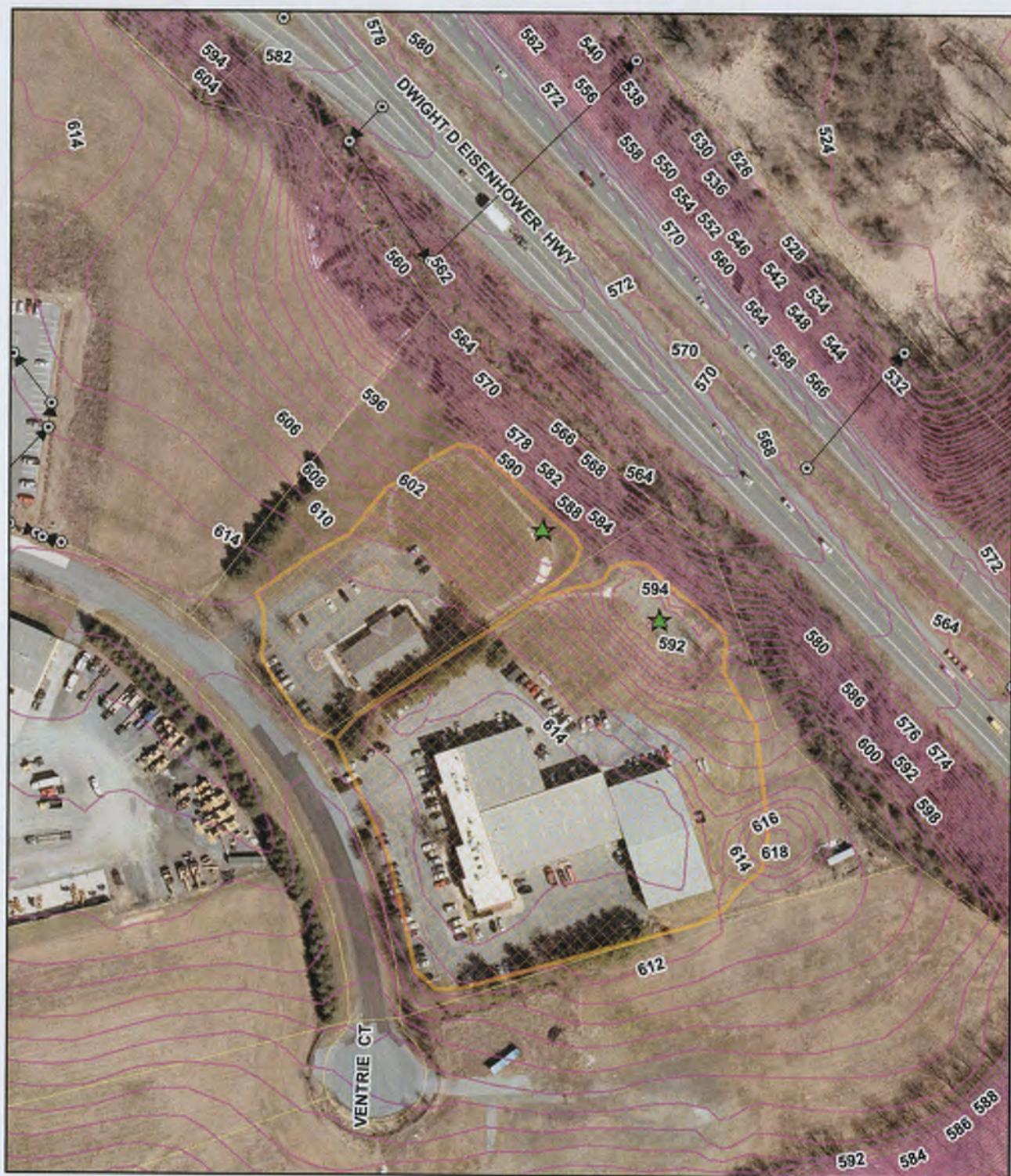
- Probable Not Probable
 Probable Not Probable

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- Confirm property ownership Obtain existing stormwater practice as-builts
 Confirm drainage area Obtain site as-builts
 Confirm drainage area impervious cover Obtain detailed topography
 Confirm volume computations Obtain utility mapping
 Complete concept sketch Confirm storm drain invert elev.
 Other: _____ Confirm soil types

Restoration Sites 116 and 117



Catoclin Creek Watershed Assessment



- ▲ Existing BMP
- ⊙ SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- Parcel Boundaries
- Restoration Opp



0 250 500 Feet

WATERSHED: <u>CA10</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>116</u>	
DATE: <u>5/24/18</u>		ASSESSED BY: <u>MV, JS</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Unknown					
If Public, Government Jurisdiction: <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> DOT <input type="checkbox"/> Other: _____					
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond			<input type="checkbox"/> Hotspot Operation		
<input type="checkbox"/> Below Outfall			<input type="checkbox"/> Small Parking Lot		
<input type="checkbox"/> In Road ROW			<input type="checkbox"/> Individual Street		
<input type="checkbox"/> Other: _____			<input type="checkbox"/> Underground		
<input type="checkbox"/> Above Roadway Culvert			<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> In Conveyance System			<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> Near Large Parking Lot			<input type="checkbox"/> Landscape / Hardscape		
			<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>3.96 ac.</u>			Drainage Area Land Use:		
Imperviousness = _____ %			<input type="checkbox"/> Residential		
Impervious Area = <u>2.43 ac.</u>			<input type="checkbox"/> SFH (< 1 ac lots)		
Notes:			<input type="checkbox"/> SFH (> 1 ac lots)		
			<input type="checkbox"/> Townhouses		
			<input type="checkbox"/> Multi-Family		
			<input checked="" type="checkbox"/> Commercial		
			<input type="checkbox"/> Institutional		
			<input type="checkbox"/> Industrial		
			<input type="checkbox"/> Transport-Related		
			<input type="checkbox"/> Park		
			<input type="checkbox"/> Undeveloped		
			<input type="checkbox"/> Other: _____		
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possible					
If Yes, Describe:					
<u>Infiltration Basin</u>					
<u>- two inflow ditches</u>					
<u>- outlet is a subtle earthen notch in embankment</u>					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
<u>Trees growing on embankment, but stone-covered bottom is largely free of vegetation and debris/sediment.</u>					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention <input checked="" type="checkbox"/> Wet Pond <input type="checkbox"/> Created Wetland <input type="checkbox"/> Bioretention					
<input type="checkbox"/> Filtering Practice <input type="checkbox"/> Infiltration <input type="checkbox"/> Swale <input type="checkbox"/> Other: _____					

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- Add soil type that will hold water
- Install riser
- Install weebays at in-flows

SITE CONSTRAINTS
Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe:
Access:
 No Constraints

Constrained due to

- Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None *septic area should not be impacted*
 Unknown

Yes
Possible

- Sewer
 Water
 Gas
 Cable
 Electric
 Electric to Streetlights
 Overhead Wires
 Other: _____

Potential Permitting Factors:

Dam Safety Permits Necessary

Impacts to Wetlands

Impacts to a Stream

Floodplain Fill

Impacts to Forests

Impacts to Specimen Trees

How many? _____

Approx. DBH _____

- | | |
|--|--|
| <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input checked="" type="checkbox"/> Confirm volume computations | <input type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input checked="" type="checkbox"/> Confirm soil types |

Unique Site ID: _____

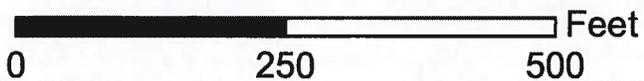
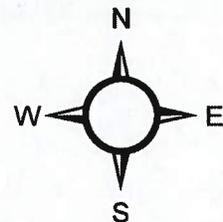
Restoration Sites 116 and 117



Catoctin Creek Watershed Assessment



- ▲ Existing BMP
- ⊙ SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- ▭ Parcel Boundaries
- Restoration Opp



WATERSHED: <u>CAT0</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>117</u>	
DATE: <u>5/24/18</u>		ASSESSED BY: <u>MV, JS</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Unknown					
If Public, Government Jurisdiction: <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> DOT <input type="checkbox"/> Other: _____					
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>1.59</u>			Drainage Area Land Use:		
Imperviousness = _____ %			<input type="checkbox"/> Residential	<input type="checkbox"/> Institutional	
Impervious Area = <u>0.62</u>			<input type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial	
Notes:			<input type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related	
			<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park	
			<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped	
			<input checked="" type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____	
			EXISTING STORMWATER MANAGEMENT		
Existing Stormwater Practice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possible					
If Yes, Describe: <u>Two infiltration branches are inflows to the extended detention dry pond. Control structure is a concrete riser with a perforated PVC pipe that connects to a 3" orifice</u>					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance: 					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention	<input type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention		
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input type="checkbox"/> Other: _____		

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

Retrofitting this pond would be difficult due to the limited amount of available space.
 would need to shift riser further up the embankment and build up embankment.
 It's possible that there is enough space for a linear bioretention facility if ITs are removed.

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe: _____

Access:

- No Constraints
 Constrained due to
 Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None
 Unknown

Yes	Possible	
<input type="checkbox"/>	<input type="checkbox"/>	Sewer
<input type="checkbox"/>	<input type="checkbox"/>	Water
<input type="checkbox"/>	<input type="checkbox"/>	Gas
<input type="checkbox"/>	<input type="checkbox"/>	Cable
<input type="checkbox"/>	<input type="checkbox"/>	Electric
<input type="checkbox"/>	<input type="checkbox"/>	Electric to Streetlights
<input type="checkbox"/>	<input type="checkbox"/>	Overhead Wires
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other: <u>Septic</u>

Potential Permitting Factors:

- | | | |
|------------------------------|-----------------------------------|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input checked="" type="checkbox"/> Confirm volume computations | <input type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

Unique Site ID: _____

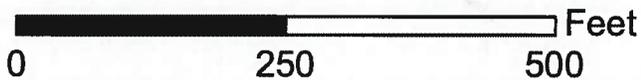
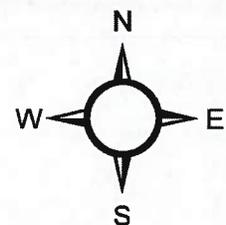
Restoration Site 188



Catoctin Creek Watershed Assessment



- ▲ Existing BMP
- ⊙ SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- ▭ Parcel Boundaries
- Restoration Opp



WATERSHED: <u>CATO</u>		SUBWATERSHED:	UNIQUE SITE ID: <u>188</u>		
DATE: <u>5/24/18</u>	ASSESSED BY: <u>MV, SS</u>		PICTURES:		
LAT:		LONG:			
SITE DESCRIPTION					
Name: _____ Address: _____					
Ownership:		<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Unknown	
If Public, Government Jurisdiction:		<input type="checkbox"/> Local	<input type="checkbox"/> State	<input type="checkbox"/> DOT	<input type="checkbox"/> Other: _____
Proposed Retrofit Location:					
Storage		On-Site			
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Other: _____			
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>10.29</u>		Drainage Area Land Use:			
Imperviousness = _____ %		<input type="checkbox"/> Residential	<input type="checkbox"/> Institutional		
Impervious Area = <u>1.83</u>		<input type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial		
Notes:		<input checked="" type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related		
		<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park		
		<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped		
		<input type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____		
		EXISTING STORMWATER MANAGEMENT			
Existing Stormwater Practice:		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Possible	
If Yes, Describe:					
<p>- Extended detention dry pond</p> <ul style="list-style-type: none"> • Three CMP pipes discharge to riprap ditch, which is facility's only inflow • Small CMP riser with 3" orifice covered by aluminum steel trash rack • 15" A/CMP pipe spillway pipe that outfalls on golf course property. 					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
<p>- Pond was holding a small amount of water due to recent rain.</p> <p>- Minor/moderate erosion along inflow channel</p> <p>- Minor erosion in outfall channel where riprap ends.</p>					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention	<input checked="" type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention		
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input type="checkbox"/> Other: _____		

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- Add forebay
- Replace riser with concrete riser
 - Raise height of orifice on lower bottom of pool roof riser
- Add manhole at new riser

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe: _____

Access:

No Constraints

Constrained due to

- Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None
 Unknown

- | Yes | Possible | |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Sewer |
| <input type="checkbox"/> | <input type="checkbox"/> | Water |
| <input type="checkbox"/> | <input type="checkbox"/> | Gas |
| <input type="checkbox"/> | <input type="checkbox"/> | Cable |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric to Streetlights |
| <input type="checkbox"/> | <input type="checkbox"/> | Overhead Wires |
| <input type="checkbox"/> | <input type="checkbox"/> | Other: _____ |

Potential Permitting Factors:

- | | | |
|------------------------------|-----------------------------------|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

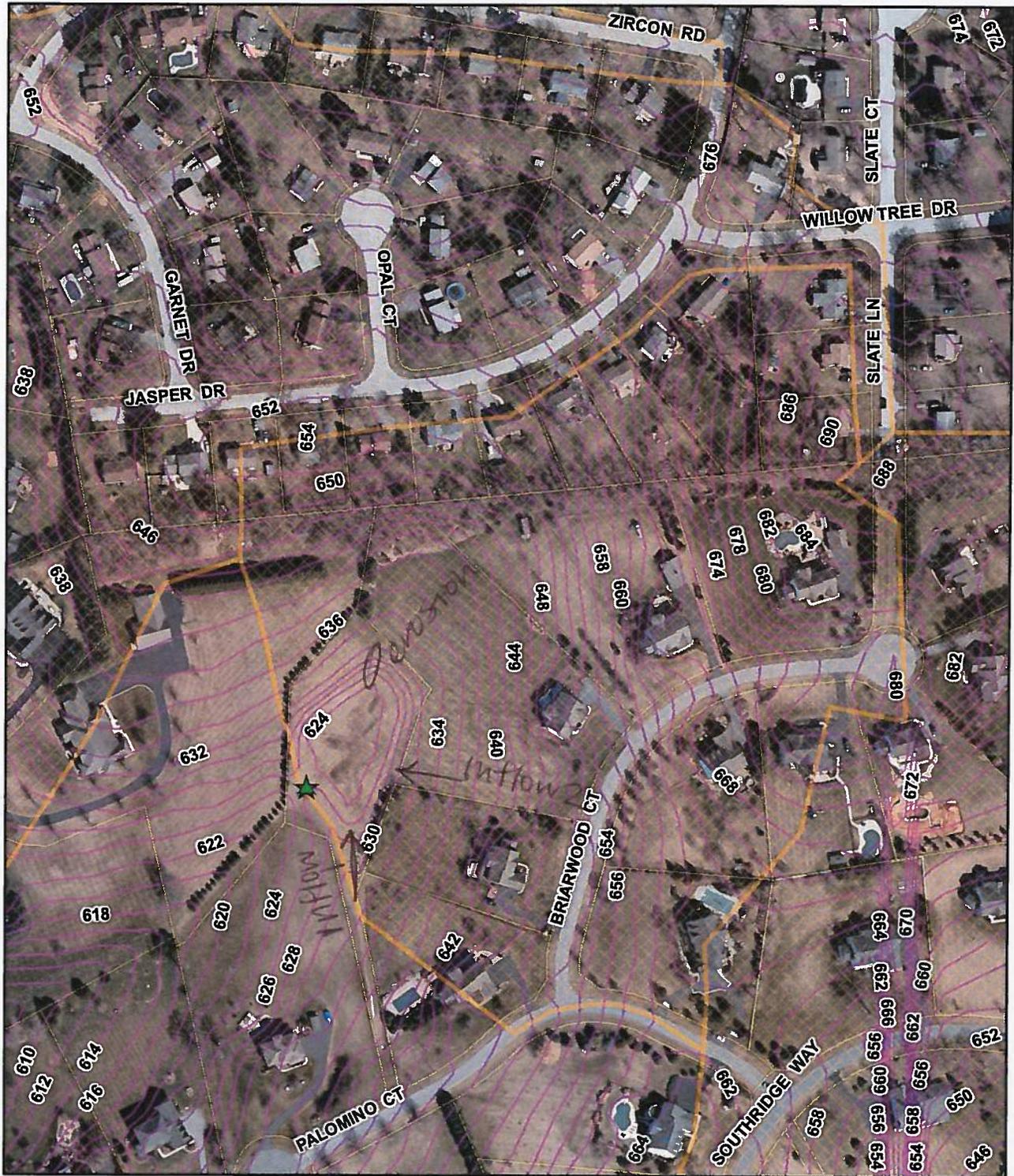
Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|--|
| <input checked="" type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input checked="" type="checkbox"/> Confirm volume computations | <input type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

Unique Site ID: _____

Restoration Site 208

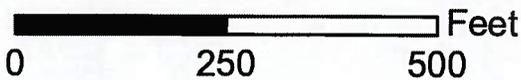
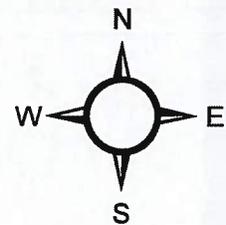


* More storage volume
 * Modify weir
 Check DA

Catoctin Creek Watershed Assessment



- ▲ Existing BMP
- ⊙ SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- ▭ Parcel Boundaries
- Restoration Opp



Inflow #1

21" CMP
to grass ditch
w/ riprap outfall

Inflow #2

24" CMP w/ concrete headwall
to grass ditch
w/ riprap apron

Control Structure

concrete weir 23'4" total, 3' notch
w/ PVC low flow → 3" low-flow
geotextile w/ riprap outfall

WATERSHED: <u>CATO</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>208</u>	
DATE: <u>6/5/18</u>		ASSESSED BY: <u>MY VH</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership:		<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Unknown	<u>HOA</u>
If Public, Government Jurisdiction:		<input type="checkbox"/> Local	<input type="checkbox"/> State	<input type="checkbox"/> DOT	<input type="checkbox"/> Other: _____
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>17.79</u>			Drainage Area Land Use:		
Imperviousness = _____ %			<input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Institutional	
Impervious Area = <u>2.15</u>			<input checked="" type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial	
Notes:			<input checked="" type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related	
			<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park	
			<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped	
			<input type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____	
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice:		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Possible	
If Yes, Describe:					
Existing shallow marsh with two inlets:					
• 21" CMP draining to grass ditch with riprap where ditch meets marsh					
• 24" CMP w/ concrete headwall draining to grass ditch with riprap where ditch meets marsh (some erosion around riprap)					
- control structure is a concrete weir with a 3/4" orifice plate draining a PVC 16" flow pipe. outfalls to riprap plunge pool that discharges to a grass channel.					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention	<input type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention		
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input checked="" type="checkbox"/> Other: <u>Shallow Marsh</u>		

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- Modify weir and/or storage area to allow for greater storage volume if Byp is not already treating !!

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe: *may need to access by going through residential yards.*

Access:

- No Constraints
 Constrained due to
 Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None
 Unknown

Yes	Possible	
<input type="checkbox"/>	<input type="checkbox"/>	Sewer
<input type="checkbox"/>	<input type="checkbox"/>	Water
<input type="checkbox"/>	<input type="checkbox"/>	Gas
<input type="checkbox"/>	<input type="checkbox"/>	Cable
<input type="checkbox"/>	<input type="checkbox"/>	Electric
<input type="checkbox"/>	<input type="checkbox"/>	Electric to Streetlights
<input type="checkbox"/>	<input type="checkbox"/>	Overhead Wires
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____

Potential Permitting Factors:

- | | | |
|------------------------------|--|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
- How many? _____
 Approx. DBH _____

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input checked="" type="checkbox"/> Confirm volume computations | <input checked="" type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

Unique Site ID: _____

Restoration Site 268

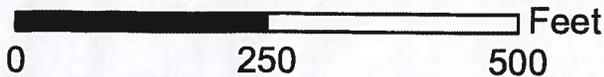
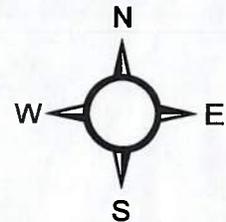
3-24
 CP
 WASH
 VIEW
 RD
 HINDS NO
 STRAITS
 ROAD
 FROM SANDS
 6
 2012
 2013
 2014
 2015
 2016
 2017
 2018
 2019
 2020
 2021
 2022
 2023
 2024



Catoctin Creek Watershed Assessment



- ▲ Existing BMP
- ⊙ SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- ▭ Parcel Boundaries
- Restoration Opp



WATERSHED: <u>CATD</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>268</u>	
DATE: <u>5/30/18</u>		ASSESSED BY: <u>mk, JS</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Unknown					
If Public, Government Jurisdiction: <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> DOT <input type="checkbox"/> Other: _____					
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond		<input type="checkbox"/> Above Roadway Culvert		<input type="checkbox"/> Hotspot Operation	
<input type="checkbox"/> Below Outfall		<input type="checkbox"/> In Conveyance System		<input type="checkbox"/> Small Parking Lot	
<input type="checkbox"/> In Road ROW		<input type="checkbox"/> Near Large Parking Lot		<input type="checkbox"/> Individual Street	
<input type="checkbox"/> Other: _____				<input type="checkbox"/> Individual Rooftop	
				<input type="checkbox"/> Small Impervious Area	
				<input type="checkbox"/> Landscape / Hardscape	
				<input type="checkbox"/> Other: _____	
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>16.92</u>			Drainage Area Land Use:		
Imperviousness = _____ %			<input checked="" type="checkbox"/> Residential		
Impervious Area = <u>6.95</u>			<input type="checkbox"/> SFH (< 1 ac lots)		
Notes:			<input checked="" type="checkbox"/> SFH (> 1 ac lots)		
			<input type="checkbox"/> Townhouses		
			<input type="checkbox"/> Multi-Family		
			<input type="checkbox"/> Commercial		
			<input type="checkbox"/> Institutional		
			<input type="checkbox"/> Industrial		
			<input type="checkbox"/> Transport-Related		
			<input type="checkbox"/> Park		
			<input type="checkbox"/> Undeveloped		
			<input type="checkbox"/> Other: _____		
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possible					
If Yes, Describe:					
<u>Extended Detention Wet Pond</u>					
<u>- Two CPP inflow pipes ~ 24"</u>					
<u>- Concrete weir has 3 - 24" CPP barrels</u>					
<u>- Permanent micropool</u>					
<u>- Emergency Spillway behind riser</u>					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
<u>- Many small trees in and around pond, but hit on embankment near control structure</u>					
Proposed Treatment Option:					
<input checked="" type="checkbox"/> Extended Detention		<input type="checkbox"/> Wet Pond		<input type="checkbox"/> Created Wetland	
<input type="checkbox"/> Filtering Practice		<input type="checkbox"/> Infiltration		<input type="checkbox"/> Swale	
				<input type="checkbox"/> Bioretention	
				<input checked="" type="checkbox"/> Other: <u>Micropool ED</u>	

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:
 - redirect inflow that's close to riser so it discharges into treatment area and does not short-circuit
 - Add new or extend existing micropool
 - Modify riser

SITE CONSTRAINTS

Adjacent Land Use:
 Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____
Possible Conflicts Due to Adjacent Land Use? Yes No
If Yes, Describe:

Access:
 No Constraints
 Constrained due to
 Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:
 None
 Unknown

Yes	Possible	
<input type="checkbox"/>	<input type="checkbox"/>	Sewer
<input type="checkbox"/>	<input type="checkbox"/>	Water
<input type="checkbox"/>	<input type="checkbox"/>	Gas
<input type="checkbox"/>	<input type="checkbox"/>	Cable
<input type="checkbox"/>	<input type="checkbox"/>	Electric
<input type="checkbox"/>	<input type="checkbox"/>	Electric to Streetlights
<input type="checkbox"/>	<input type="checkbox"/>	Overhead Wires
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____

Potential Permitting Factors:
 Dam Safety Permits Necessary Probable Not Probable
 Impacts to Wetlands Probable Not Probable
 Impacts to a Stream Probable Not Probable
 Floodplain Fill Probable Not Probable
 Impacts to Forests Probable Not Probable
 Impacts to Specimen Trees Probable Not Probable
 How many? _____
 Approx. DBH _____
Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

<input type="checkbox"/> Confirm property ownership	<input checked="" type="checkbox"/> Obtain existing stormwater practice as-builts
<input type="checkbox"/> Confirm drainage area	<input checked="" type="checkbox"/> Obtain site as-builts
<input type="checkbox"/> Confirm drainage area impervious cover	<input type="checkbox"/> Obtain detailed topography
<input checked="" type="checkbox"/> Confirm volume computations	<input type="checkbox"/> Obtain utility mapping
<input type="checkbox"/> Complete concept sketch	<input type="checkbox"/> Confirm storm drain invert elev.
<input type="checkbox"/> Other: _____	<input type="checkbox"/> Confirm soil types

Restoration Site 386



RIF PDP →
 W/10FT
 160FT

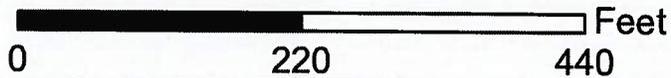
5.71
 AC
 DA

Catoctin Creek Watershed Assessment



- ▲ Existing BMP
- ⊙ SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- ▭ Parcel Boundaries
- Restoration Opp

SPOKE W/NEIGHBOR
 PLEASE
 HELP
 NEEDS
 MAINTENANCE



WATERSHED: <u>CATU</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>386</u>	
DATE: <u>5/24/18</u>		ASSESSED BY: <u>MV, JS</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Unknown					
If Public, Government Jurisdiction: <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> DOT <input type="checkbox"/> Other: _____					
Proposed Retrofit Location:					
Storage			On-Site		
<input type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input checked="" type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>5.71 ac</u>			Drainage Area Land Use:		
Imperviousness = _____ %			<input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Institutional	
Impervious Area = <u>1.06 ac</u>			<input type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial	
Notes:			<input checked="" type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related	
			<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park	
			<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped	
			<input type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____	
			EXISTING STORMWATER MANAGEMENT		
Existing Stormwater Practice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possible					
If Yes, Describe: <u>Infiltrating check dams designed in early 90s. A 15" BCCMP draining two inlets along Bilde Hill, and an 18" BCCMP connected to head wall draining 1.5 acre residential lots discharge to the facility. Facility is 16' wide and 3 overgrown in spots.</u>					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance: <u>~ 5 check dams</u>					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention	<input type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention		
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input checked="" type="checkbox"/> Other: <u>RSC</u>		

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

-Remove r.prap and add RSC channel material. The cost and time it will take to displace and haul away existing r.prap may make a retrofit project too expensive

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe: _____

Access:

- No Constraints
 Constrained due to
 Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None
 Unknown

Yes	Possible	
<input type="checkbox"/>	<input type="checkbox"/>	Sewer
<input type="checkbox"/>	<input type="checkbox"/>	Water
<input type="checkbox"/>	<input type="checkbox"/>	Gas
<input type="checkbox"/>	<input type="checkbox"/>	Cable
<input type="checkbox"/>	<input type="checkbox"/>	Electric
<input type="checkbox"/>	<input type="checkbox"/>	Electric to Streetlights
<input type="checkbox"/>	<input type="checkbox"/>	Overhead Wires
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____

Potential Permitting Factors:

- | | | |
|------------------------------|-----------------------------------|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input type="checkbox"/> Confirm volume computations | <input type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

Unique Site ID: _____

WATERSHED: <u>CATO</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>413</u>	
DATE: <u>5/30/18</u>		ASSESSED BY: <u>MV, JS</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Unknown					
If Public, Government Jurisdiction: <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> DOT <input type="checkbox"/> Other: _____					
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond			<input type="checkbox"/> Hotspot Operation		
<input checked="" type="checkbox"/> Below Outfall			<input type="checkbox"/> Small Parking Lot		
<input type="checkbox"/> In Road ROW			<input type="checkbox"/> Individual Street		
<input checked="" type="checkbox"/> Other: <u>Inflow channel / stream</u>			<input type="checkbox"/> Underground		
<input type="checkbox"/> Above Roadway Culvert			<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> In Conveyance System			<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> Near Large Parking Lot			<input type="checkbox"/> Landscape / Hardscape		
			<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>59.8 ac</u>			Drainage Area Land Use:		
Imperviousness = _____ %			<input checked="" type="checkbox"/> Residential		
Impervious Area = <u>7.98 ac</u>			<input type="checkbox"/> SFH (< 1 ac lots)		
Notes: <u>very steep neighborhood with drainage issue is draining to pond via stream channel</u>			<input checked="" type="checkbox"/> SFH (> 1 ac lots)		
			<input type="checkbox"/> Townhouses		
			<input type="checkbox"/> Multi-Family		
			<input type="checkbox"/> Commercial		
			<input type="checkbox"/> Institutional		
			<input type="checkbox"/> Industrial		
			<input type="checkbox"/> Transport-Related		
			<input type="checkbox"/> Park		
			<input type="checkbox"/> Undeveloped		
			<input type="checkbox"/> Other: _____		
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possible					
If Yes, Describe:					
<u>Dry pond constructed in 1981/1982</u>					
<u>- Inflow is a stream channel</u>					
<u>- control structure is a culvert with 12" low flow to a 42" corr barrel and 24" overflow spillway.</u>					
<u>- Emergency spillway is now a marsh wetland</u>					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
<u>- Severe erosion in inflow channel that has exposed telecommunications like</u>					
<u>- severe erosion around embankments upstream of inflow.</u>					
<u>- Pond full of sediment and native trees.</u>					
<u>- owner has been clearing trees from embankments</u>					
<u>- outfall apron bottom has corroded away</u>					
<u>- outfall discharges to stream that appears to be draining ES wetland</u>					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention <input checked="" type="checkbox"/> Wet Pond <input type="checkbox"/> Created Wetland <input type="checkbox"/> Bioretention					
<input type="checkbox"/> Filtering Practice <input type="checkbox"/> Infiltration <input type="checkbox"/> Swale <input checked="" type="checkbox"/> Other: <u>Outfall stabilization/stream</u>					

Restoration upstream of pond.
Stream restoration downstream of pond.

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

~ 100 - 125 ft. of stabilization in inflow channel
 ~ 100 - 200 ft. of stabilization ^{in channel} downstream of pond / adjacent to large farm pond
 = could retrofit dry pond to wet pond, but would be a permitting nightmare.

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe: _____

Access:

- No Constraints
 Constrained due to
 Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: FRO

Conflicts with Existing Utilities:

- None
 Unknown
- | Yes | Possible | |
|-------------------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Sewer |
| <input type="checkbox"/> | <input type="checkbox"/> | Water |
| <input type="checkbox"/> | <input type="checkbox"/> | Gas |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Cable |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric to Streetlights |
| <input type="checkbox"/> | <input type="checkbox"/> | Overhead Wires |
| <input type="checkbox"/> | <input type="checkbox"/> | Other: _____ |

Potential Permitting Factors:

- | | | |
|------------------------------|--|---------------------------------------|
| Dam Safety Permits Necessary | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to a Stream | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Floodplain Fill | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to Forests | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|---|
| <input type="checkbox"/> Confirm property ownership | <input checked="" type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area | <input checked="" type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input type="checkbox"/> Confirm volume computations | <input checked="" type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

Unique Site ID: _____

Restoration Site 419

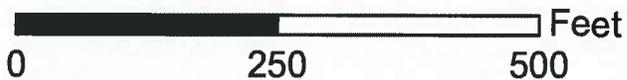
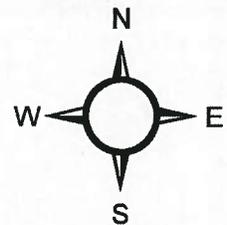


POSSIBLY
OVER SPREAD
FOR
FUTURE
EXPANSION
WOULD
NOT WANT
TO REDUCE
THAT
DURING
RESTORATION

Catoctin Creek Watershed Assessment



- ★ Restoration Opportunity
- Pipes
- Streams
- ▲ Structures
- Parcels



WATERSHED: <u>CATO</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>419</u>	
DATE: <u>5/1/18</u>		ASSESSED BY: <u>MV/JS</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: <u>HOLY FAMILY CATHOLIC CHURCH (EMP 419)</u>					
Address: _____					
Ownership:		<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Unknown	<u>CHURCH</u>
If Public, Government Jurisdiction:		<input type="checkbox"/> Local	<input type="checkbox"/> State	<input type="checkbox"/> DOT	<input type="checkbox"/> Other: _____
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input checked="" type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = _____			Drainage Area Land Use:		
Imperviousness = _____ %			<input type="checkbox"/> Residential	<input type="checkbox"/> Institutional	
Impervious Area = _____			<input type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial	
Notes:			<input type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related	
			<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park	
			<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped	
			<input type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Other: <u>CHURCH</u>	
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice:		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Possible	
If Yes, Describe: <u>LARGE POND RETROFITTED IN 2005 TO ADD FOREBAY & WET POOL</u> <u>INFLOW FROM 2 GRASSED DITCHES ON EITHER SIDE OF PROPERTY</u>					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance: <u>DRAINAGE DITCH ON NORTH SIDE OF PROPERTY IS NOT GRADED FOR POSITIVE DRAINAGE SO H₂O POUNDS @ PARKING LOT. CHURCH INTERESTED IN RAIN GARDEN.</u> <u>EROSION @ END OF BOTH DITCHES @ RIPRAP BEFORE RECHARGE AREA. EVIDENCE OF GROUNDHOGS IN EMBANKMENT</u>					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention	<input type="checkbox"/> Wet Pond	<input checked="" type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention		
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input checked="" type="checkbox"/> Other: <u>ADD'L RAIN GARDENS/BIORETENTION @ PARKING LOTS</u>		

Unique Site ID: 419

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

BELIEVE POND IS ALREADY TREATING 1" - NEED TO CONFIRM
 SOME GENERAL MAINTENANCE COULD OCCUR
 COULD ADD WETLAND PLANTS TO CREATE HABITAT
 RAIN GARDENS/BIORETENTIONS @ TOP OF BOTH
 DITCHES

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: CHURCH

Possible Conflicts Due to Adjacent Land Use? Yes No
 If Yes, Describe: _____

Access:

- No Constraints
 Constrained due to
 Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None
 Unknown

Yes	Possible	
<input type="checkbox"/>	<input type="checkbox"/>	Sewer
<input type="checkbox"/>	<input type="checkbox"/>	Water
<input type="checkbox"/>	<input type="checkbox"/>	Gas
<input type="checkbox"/>	<input type="checkbox"/>	Cable
<input type="checkbox"/>	<input type="checkbox"/>	Electric
<input type="checkbox"/>	<input type="checkbox"/>	Electric to Streetlights
<input type="checkbox"/>	<input type="checkbox"/>	Overhead Wires
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other: <u>SEPTIC</u>

Potential Permitting Factors:

- | | | |
|------------------------------|-----------------------------------|---------------------------------------|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input type="checkbox"/> Confirm volume computations | <input type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

Unique Site ID: _____

Restoration Site 420_421

183 CPP

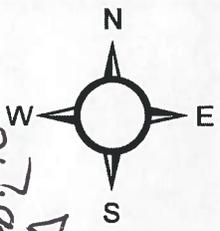
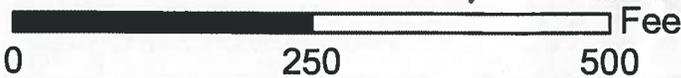


Catoctin Creek Watershed Assessment



- ★ Restoration Opportunity
- Pipes
- Streams
- ▲ Structures

SEE NEW 2012 PLAN FOR TRENCH DRAIN & ADD'L DA



WATERSHED: <u>CATO</u>	SUBWATERSHED:	UNIQUE SITE ID: <u>420</u>			
DATE: <u>5/30/18</u>	ASSESSED BY: <u>MVJS</u>	PICTURES:			
LAT:	LONG:				
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Unknown <u>Sheppard Pratt</u> If Public, Government Jurisdiction: <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> DOT <input type="checkbox"/> Other: _____					
Proposed Retrofit Location:					
<table style="width:100%; border:none;"> <tr> <td style="width:33%; vertical-align: top;"> Storage <input checked="" type="checkbox"/> Existing Pond <input type="checkbox"/> Above Roadway Culvert <input type="checkbox"/> Below Outfall <input type="checkbox"/> In Conveyance System <input type="checkbox"/> In Road ROW <input type="checkbox"/> Near Large Parking Lot <input type="checkbox"/> Other: _____ </td> <td style="width:33%; vertical-align: top;"> On-Site <input type="checkbox"/> Hotspot Operation <input type="checkbox"/> Individual Rooftop <input type="checkbox"/> Small Parking Lot <input type="checkbox"/> Small Impervious Area <input type="checkbox"/> Individual Street <input type="checkbox"/> Landscape / Hardscape <input type="checkbox"/> Underground <input type="checkbox"/> Other: _____ </td> <td style="width:33%;"></td> </tr> </table>			Storage <input checked="" type="checkbox"/> Existing Pond <input type="checkbox"/> Above Roadway Culvert <input type="checkbox"/> Below Outfall <input type="checkbox"/> In Conveyance System <input type="checkbox"/> In Road ROW <input type="checkbox"/> Near Large Parking Lot <input type="checkbox"/> Other: _____	On-Site <input type="checkbox"/> Hotspot Operation <input type="checkbox"/> Individual Rooftop <input type="checkbox"/> Small Parking Lot <input type="checkbox"/> Small Impervious Area <input type="checkbox"/> Individual Street <input type="checkbox"/> Landscape / Hardscape <input type="checkbox"/> Underground <input type="checkbox"/> Other: _____	
Storage <input checked="" type="checkbox"/> Existing Pond <input type="checkbox"/> Above Roadway Culvert <input type="checkbox"/> Below Outfall <input type="checkbox"/> In Conveyance System <input type="checkbox"/> In Road ROW <input type="checkbox"/> Near Large Parking Lot <input type="checkbox"/> Other: _____	On-Site <input type="checkbox"/> Hotspot Operation <input type="checkbox"/> Individual Rooftop <input type="checkbox"/> Small Parking Lot <input type="checkbox"/> Small Impervious Area <input type="checkbox"/> Individual Street <input type="checkbox"/> Landscape / Hardscape <input type="checkbox"/> Underground <input type="checkbox"/> Other: _____				
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>4.72 ac</u> Imperviousness = _____ % Impervious Area = <u>2.25 ac</u>	Drainage Area Land Use: <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Institutional <input type="checkbox"/> SFH (< 1 ac lots) <input type="checkbox"/> Industrial <input type="checkbox"/> SFH (> 1 ac lots) <input type="checkbox"/> Transport-Related <input type="checkbox"/> Townhouses <input type="checkbox"/> Park <input type="checkbox"/> Multi-Family <input type="checkbox"/> Undeveloped <input type="checkbox"/> Commercial <input type="checkbox"/> Other: _____				
Notes: _____					
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possible If Yes, Describe: <u>Existing EDSD facility with two inflows:</u> <ul style="list-style-type: none"> • 15" HDPE draining rain garden • 18" HDPE discharging to inflow tank on east side - control structure is concrete weir with 2" orifice draining 8" perforated PVC low flow pipe with clean-out					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance: <u>A rain garden was added to the drainage area in 2013 to treat additional impervious associated with water treatment building expansion.</u>					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention <input type="checkbox"/> Wet Pond <input type="checkbox"/> Created Wetland <input checked="" type="checkbox"/> Bioretention <input type="checkbox"/> Filtering Practice <input type="checkbox"/> Infiltration <input type="checkbox"/> Swale <input type="checkbox"/> Other: _____					

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- Add forebay for ditch / 18" HDPE inflow
 - Add bio-retention soil mix and plants
 - Modify low flow pipe or remove for adding an underdrain

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Access:

- No Constraints
 Constrained due to
 Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe: *may need to increase perm fence height due to proximity of school children*

Conflicts with Existing Utilities:

- None
 Unknown
- | Yes | Possible | |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Sewer |
| <input type="checkbox"/> | <input type="checkbox"/> | Water |
| <input type="checkbox"/> | <input type="checkbox"/> | Gas |
| <input type="checkbox"/> | <input type="checkbox"/> | Cable |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric to Streetlights |
| <input type="checkbox"/> | <input type="checkbox"/> | Overhead Wires |
| <input type="checkbox"/> | <input type="checkbox"/> | Other: _____ |

Potential Permitting Factors:

- | | | |
|------------------------------|--|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|--|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input checked="" type="checkbox"/> Confirm volume computations | <input checked="" type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input checked="" type="checkbox"/> Confirm soil types |

Unique Site ID: _____

Restoration Site 420_421

183 CPP

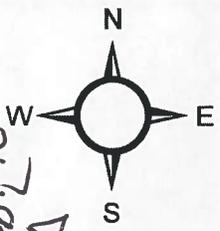
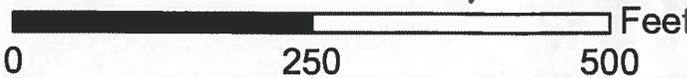


Catoctin Creek Watershed Assessment



- ★ Restoration Opportunity
- Pipes
- Streams
- ▲ Structures

SEE NEW 2012 PLAN FOR TRENCH DRAIN & ADD'L DA





WATERSHED: <u>CATO</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>421</u>	
DATE: <u>5/30/18</u>		ASSESSED BY: <u>MYJS</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership:		<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Unknown	<u>Shared Pracht</u>
If Public, Government Jurisdiction:		<input type="checkbox"/> Local	<input type="checkbox"/> State	<input type="checkbox"/> DOT	<input type="checkbox"/> Other: _____
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>4.04 ac.</u>			Drainage Area Land Use:		
Imperviousness = _____ %			<input type="checkbox"/> Residential	<input checked="" type="checkbox"/> Institutional	
Impervious Area = <u>1.87 ac.</u>			<input type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial	
Notes: <u>GIS DA does not include trench drains installed in 2013.</u>			<input type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related	
			<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park	
			<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped	
			<input type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____	
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice:		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Possible	
If Yes, Describe:					
<u>Existing extended detention dry structure (EDSD) with three inlets:</u>					
<u>- 15" HOPE draining SW portion of site</u>					
<u>- 18" HOPE?</u>					
<u>- 8" CMP from trench drain</u>					
<u>- Control structure is a concrete weir with 2" orifice connected to 8' perf PVC low flow pipe.</u>					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
<u>DA needs to be mod. to include area draining to trench drain.</u>					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention	<input type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input checked="" type="checkbox"/> Bioretention		
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input type="checkbox"/> Other: _____		

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- Add swiebay in area that contains the three inflows
 - Add bioretention soil mix and plants
 - Modify low flow pipe into underdrain for bioretention?

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe: _____

Access:

No Constraints

Constrained due to

- Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None
 Unknown

Yes	Possible	
<input type="checkbox"/>	<input type="checkbox"/>	Sewer
<input type="checkbox"/>	<input type="checkbox"/>	Water
<input type="checkbox"/>	<input type="checkbox"/>	Gas
<input type="checkbox"/>	<input type="checkbox"/>	Cable
<input type="checkbox"/>	<input type="checkbox"/>	Electric
<input type="checkbox"/>	<input type="checkbox"/>	Electric to Streetlights
<input type="checkbox"/>	<input type="checkbox"/>	Overhead Wires
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____

Potential Permitting Factors:

- | | | |
|------------------------------|-----------------------------------|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

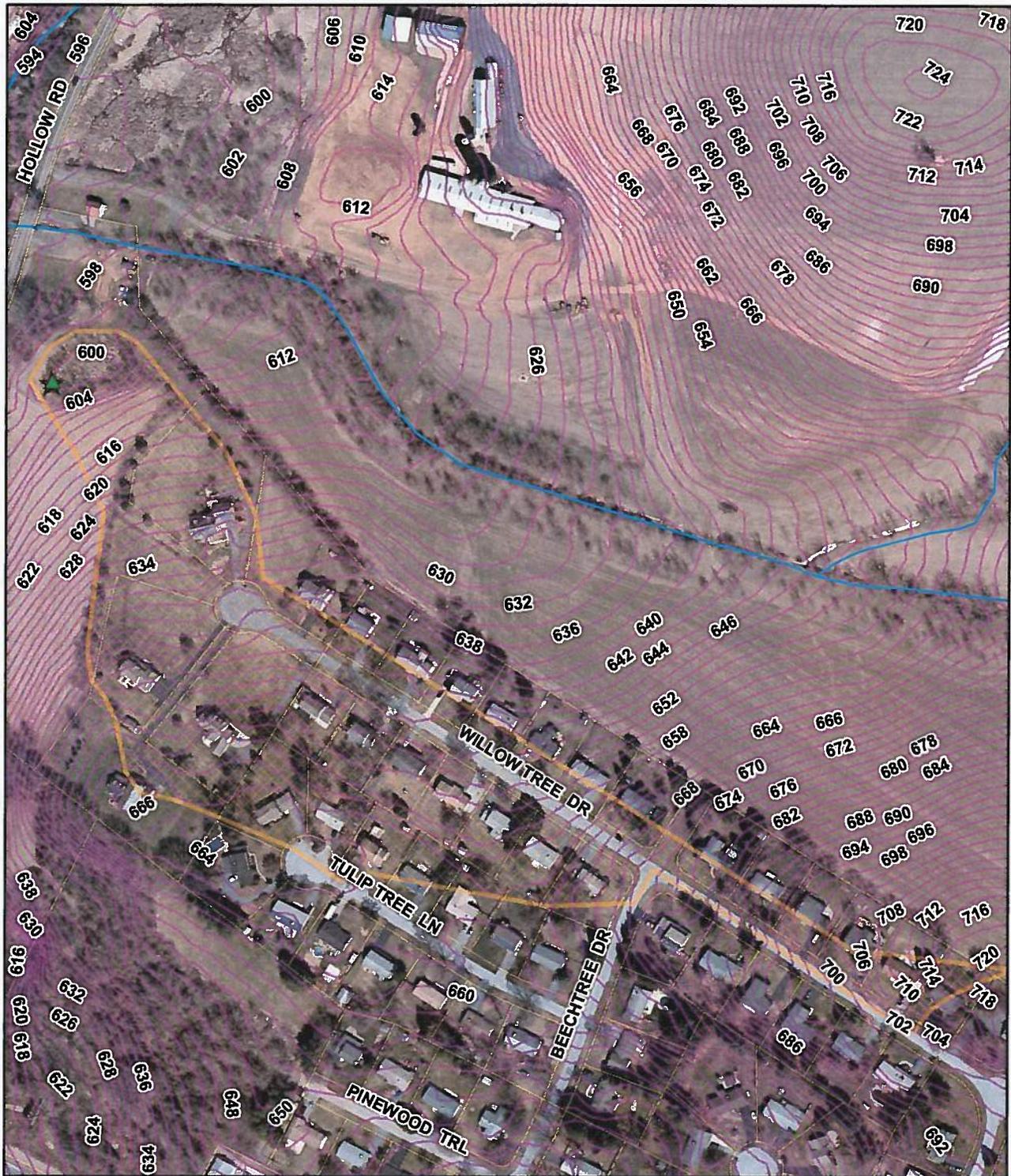
Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|--|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input checked="" type="checkbox"/> Confirm volume computations | <input checked="" type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input checked="" type="checkbox"/> Confirm soil types |

Unique Site ID: _____

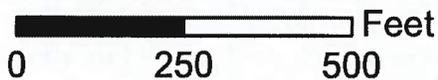
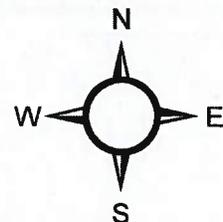
Restoration Site 496



Catoctin Creek Watershed Assessment



- ▲ Existing BMP
- ⊙ SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- ▭ Parcel Boundaries
- Restoration Opp



WATERSHED: <u>LATU</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>496</u>	
DATE: <u>5/24/18</u>		ASSESSED BY: <u>mv, ss</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership:		<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Unknown	
If Public, Government Jurisdiction:		<input type="checkbox"/> Local	<input type="checkbox"/> State	<input type="checkbox"/> DOT	<input type="checkbox"/> Other: _____
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>13 ac.</u>		Drainage Area Land Use:			
Imperviousness = _____ %		<input type="checkbox"/> Residential	<input type="checkbox"/> Institutional		
Impervious Area = <u>2.65 ac.</u>		<input checked="" type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial		
Notes:		<input checked="" type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related		
		<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park		
		<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped		
		<input type="checkbox"/> Commercial	<input checked="" type="checkbox"/> Other: <u>Ag</u>		
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice:		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Possible	
If Yes, Describe:					
<p>Extended detention dry pond.</p> <p>• one inflow → riprap channel</p> <p>• control structure is a modified type S inlet.</p> <p>- 12" PVC orifice is capped on inside of riser, water is leaking into riser from perimeter of orifice. 12" PVC principal spillway pipe.</p>					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
<p>Pond is holding 2² feet of water, likely due to capped orifice and recent rainfall.</p> <p>PVC prin. spillway pipe is exposed as leaning riser</p>					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention	<input checked="" type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention		
<input type="checkbox"/> Filtering Practice	<input checked="" type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input type="checkbox"/> Other: _____		

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- Add forebay for inflow channel
 - Modify riser and all micropool

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: Ag - Corn field

Access:

No Constraints

Constrained due to

- Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe: would likely need to cut through corn field to access

Conflicts with Existing Utilities:

- None
 Unknown

- | Yes | Possible | |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Sewer |
| <input type="checkbox"/> | <input type="checkbox"/> | Water |
| <input type="checkbox"/> | <input type="checkbox"/> | Gas |
| <input type="checkbox"/> | <input type="checkbox"/> | Cable |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric to Streetlights |
| <input type="checkbox"/> | <input type="checkbox"/> | Overhead Wires |
| <input type="checkbox"/> | <input type="checkbox"/> | Other: _____ |

Potential Permitting Factors:

- | | | |
|------------------------------|--|---------------------------------------|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to Forests | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

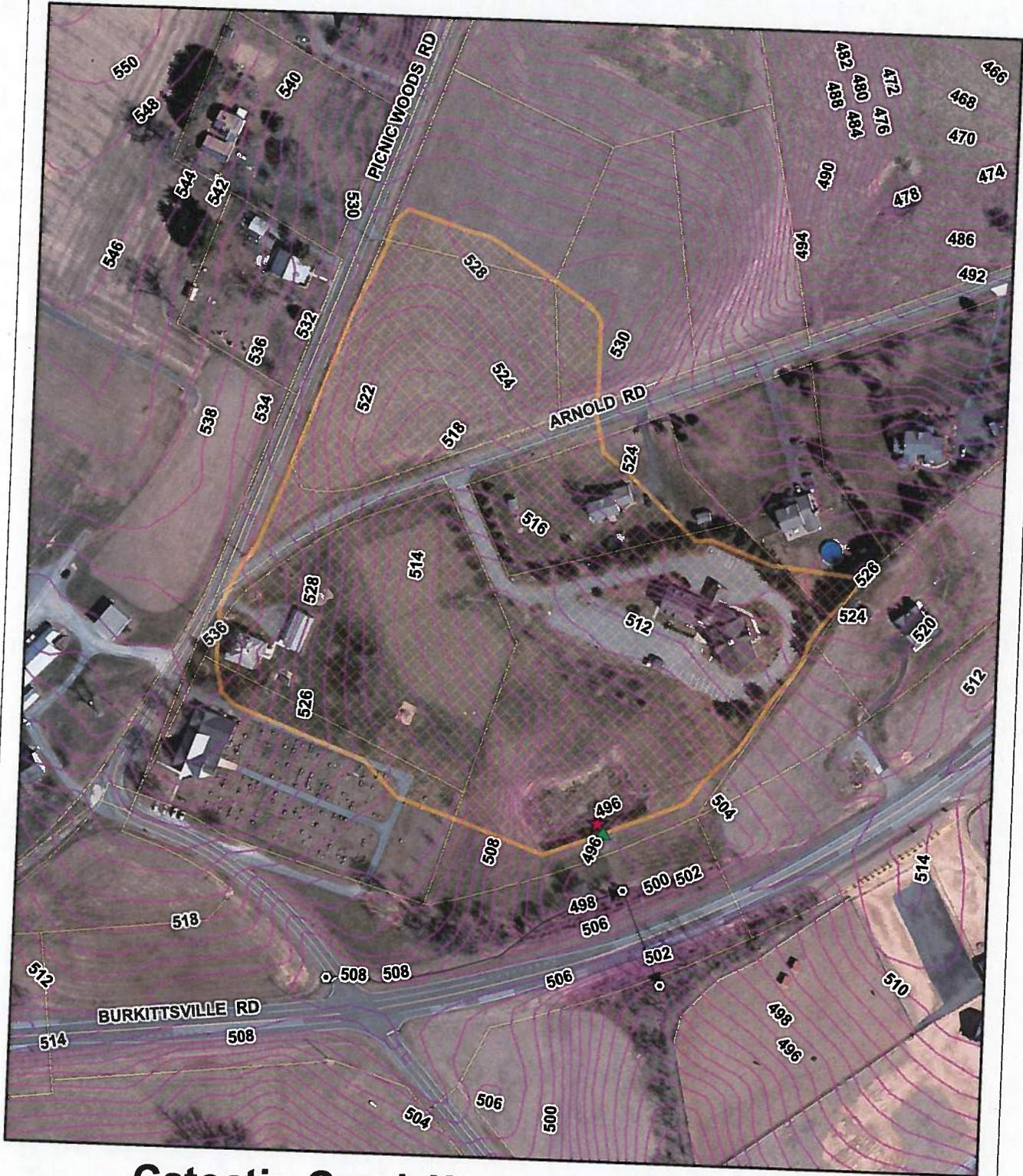
Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input type="checkbox"/> Confirm volume computations | <input type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

Unique Site ID: _____

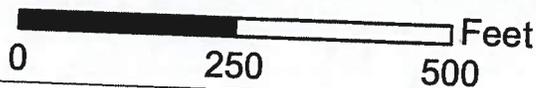
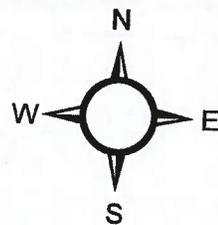
Restoration Site 616



Catoctin Creek Watershed Assessment



- ▲ Existing BMP
- ⊙ SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- ▭ Parcel Boundaries
- Restoration Opp



WATERSHED: <u>CATO</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>616</u>	
DATE:		ASSESSED BY: <u>MV JS</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership:		<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Unknown	<u>Church</u>
If Public, Government Jurisdiction:		<input type="checkbox"/> Local	<input type="checkbox"/> State	<input type="checkbox"/> DOT	<input type="checkbox"/> Other: _____
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>11.76</u>		Drainage Area Land Use:			
Imperviousness = _____ %		<input type="checkbox"/> Residential	<input type="checkbox"/> Institutional		
Impervious Area = <u>1.62 → 1.03 impervious acres</u>		<input type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial		
Notes: Site was redeveloped in 2008, at which time the ponds in the site were converted into dry swales to provide for		<input type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related		
		<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park		
		<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped		
		<input type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____		
EXISTING STORMWATER MANAGEMENT <i>control for new impervious and role of pre-existing impervious</i>					
Existing Stormwater Practice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possible					
If Yes, Describe: <u>Extended Detention Dry Pond</u>					
<ul style="list-style-type: none"> - Two dry swale pretreatment facilities / inlets - concrete weir has 3 - 1/4" orifice and is obstructed by debris • Pond is overflowing water in weir and was actually dewatering during the site visit 					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
<ul style="list-style-type: none"> - Many willows and small maple trees present in pond - Pond water level was at the high stage water elevation during the site visit - outlet channel (swale) was stable 					
Proposed Treatment Option:					
<input checked="" type="checkbox"/> Extended Detention	<input type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention		
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input checked="" type="checkbox"/> Other: <u>micro pond ED</u>		

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- Raise elevation of surface or remove orifice
 - Create micropool in front of weir or new riser

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: Church

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe:

Access:

No Constraints

Constrained due to

- Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

None

Unknown

Yes

Possible

- | | | |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Sewer |
| <input type="checkbox"/> | <input type="checkbox"/> | Water |
| <input type="checkbox"/> | <input type="checkbox"/> | Gas |
| <input type="checkbox"/> | <input type="checkbox"/> | Cable |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric to Streetlights |
| <input type="checkbox"/> | <input type="checkbox"/> | Overhead Wires |
| <input type="checkbox"/> | <input type="checkbox"/> | Other: _____ |

Potential Permitting Factors:

Dam Safety Permits Necessary

Impacts to Wetlands

Impacts to a Stream

Floodplain Fill

Impacts to Forests

Impacts to Specimen Trees

How many? _____

Approx. DBH _____

Other factors: _____

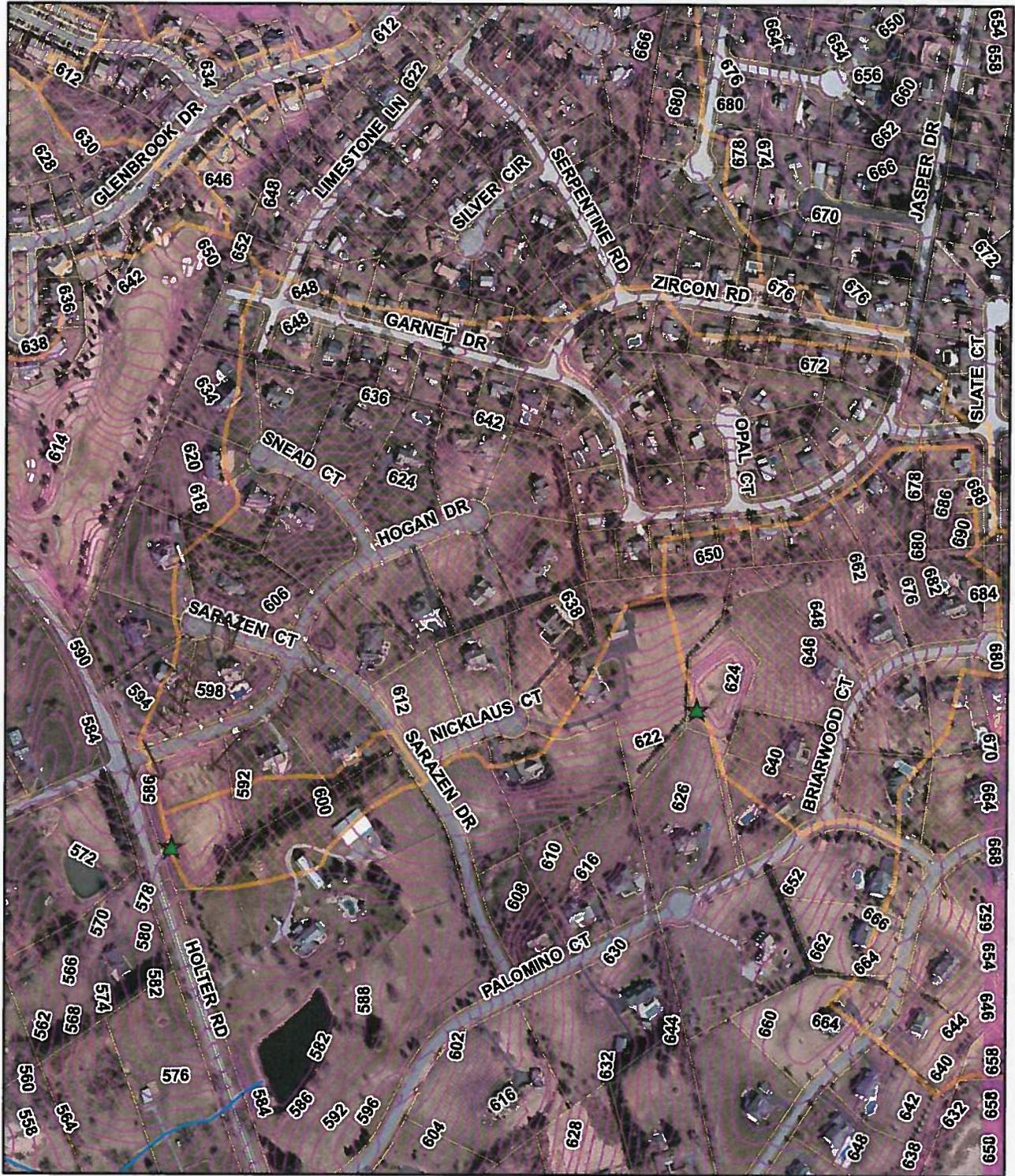
- | | |
|--|--|
| <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input type="checkbox"/> Confirm volume computations | <input type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

Unique Site ID: _____

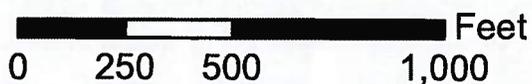
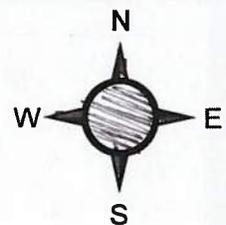
Restoration Site 628



Catoctin Creek Watershed Assessment



- ▲ Existing BMP
- ★ Restoration Opp
- Restoration Opp
- Parcel Boundaries
- BMP DA
- Parcel Boundaries
- SW Structure



Inflow #1
riprap ditch
severe erosion
completely blown out

Inflow #2

35" x 48" CMP w/ concrete headwall under Hogan Dr.

control structure

concrete weir w/ concrete low flow orifice
CMP low flow trash rack

underdrain w/ flowing water

to riprap outfall & triple CMP road culvert

Road culvert @ Hogan & Holter

27" x 48" CMP w/ concrete headwall

WATERSHED: <u>LATO</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>628</u>	
DATE: <u>6/5/18</u>		ASSESSED BY: <u>MV, JS</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership:		<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Unknown	<u>HOA</u>
If Public, Government Jurisdiction:		<input type="checkbox"/> Local	<input type="checkbox"/> State	<input type="checkbox"/> DOT	<input type="checkbox"/> Other: _____
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>54.45 ac.</u>		Drainage Area Land Use:			
Imperviousness = _____ %		<input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Institutional		
Impervious Area = <u>10.42 ac.</u>		<input checked="" type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial		
Notes:		<input checked="" type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related		
		<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park		
		<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped		
		<input type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____		
		EXISTING STORMWATER MANAGEMENT			
Existing Stormwater Practice:		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Possible	
If Yes, Describe:					
<p>Existing bioretention facility providing pre-treatment for EDSD facility</p> <ul style="list-style-type: none"> • One riprap ditch inflow that was completely blown out with most of the riprap now in the ditch • one 35" x 48" CMP with concrete headwall inflow - Both inflows discharge to bioretention area. - slight berm separates Bio area from EDSD areas control structure in EDSD 					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
<p>area is a concrete weir with a 4"x4" low flow orifice that has a CMP trash rack. An underdrain had flowing water discharges to a riprap outfall channel during the assessment. Riprap leads to a trouble CMP road culvert.</p>					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention	<input checked="" type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention		
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input type="checkbox"/> Other: _____		

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- Leave bioretention forebay
- Add permanent pool to EDSD facility
- Modify weir to allow it to retain water in the facility

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe: *Halter Rd. very close to weir*

Access:

No Constraints

Constrained due to

- Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

None

Unknown

Yes

Possible

- | | | |
|--------------------------|-------------------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Sewer |
| <input type="checkbox"/> | <input type="checkbox"/> | Water |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Gas |
| <input type="checkbox"/> | <input type="checkbox"/> | Cable |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Electric to Streetlights |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Overhead Wires |
| <input type="checkbox"/> | <input type="checkbox"/> | Other: _____ |

Potential Permitting Factors:

Dam Safety Permits Necessary

Probable Not Probable

Impacts to Wetlands

Probable Not Probable

Impacts to a Stream

Probable Not Probable

Floodplain Fill

Probable Not Probable

Impacts to Forests

Probable Not Probable

Impacts to Specimen Trees

Probable Not Probable

How many? _____

Approx. DBH _____

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- Confirm property ownership
- Confirm drainage area
- Confirm drainage area impervious cover
- Confirm volume computations
- Complete concept sketch

- Obtain existing stormwater practice as-builts
- Obtain site as-builts
- Obtain detailed topography
- Obtain utility mapping
- Confirm storm drain invert elev.
- Confirm soil types

Other: _____

Unique Site ID: _____

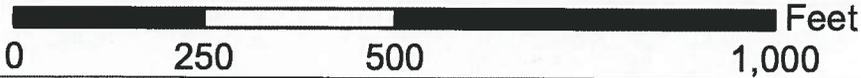
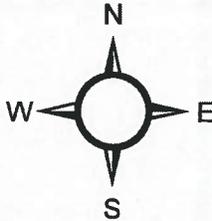
Restoration Site 672



Catoctin Creek Watershed Assessment



- ★ Restoration Opportunity
- Pipes
- Streams
- ▭ Parcels
- ▲ Structures



WATERSHED: <u>CATO</u>	SUBWATERSHED:	UNIQUE SITE ID: <u>672</u>
DATE: <u>5/1/18</u>	ASSESSED BY: <u>JS/MV</u>	PICTURES:
LAT:	LONG:	
SITE DESCRIPTION		
Name: <u>BMP 672</u>		
Address: <u>SOUTHVIEW CT JEFFERSON MD</u>		
Ownership:	<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private
If Public, Government Jurisdiction:	<input type="checkbox"/> Local	<input type="checkbox"/> State
	<input type="checkbox"/> Unknown	<input type="checkbox"/> DOT
	<input type="checkbox"/> Other: <u>HDA/OPEN SPACE</u>	
Proposed Retrofit Location:		
Storage		
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	
<input type="checkbox"/> Other: _____		
On-Site		
<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop	
<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area	
<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape	
<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____	
DRAINAGE AREA TO PROPOSED RETROFIT		
Drainage Area = <u>5-10 AC</u>	Drainage Area Land Use:	
Imperviousness = _____ %	<input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Institutional
Impervious Area = _____	<input checked="" type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial
	<input type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related
	<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park
	<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped
	<input type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____
Notes: <u>CHECK DA BASED ON GIS CONTOURS - MAY NEED TO BE REVISED</u>		
EXISTING STORMWATER MANAGEMENT		
Existing Stormwater Practice:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
If Yes, Describe:	<input type="checkbox"/> Possible	
<u>EXISTING DRY POND W/ 1 INLET</u>		
<u>SOME EROSION @ INLET & SOME BEDIMENT IN PIPE</u>		
<u>CONTROL STRUCTURE IS MISSING CAPS</u>		
<u>EROSION @ OUTFALL PIPE</u>		
<u>GEOTEXTILE WAS NOT REMOVED POST CONSTRUCTION</u>		
<u>-MISSING STONE AROUND CONTROL STRUCTURE</u>		
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:		
<u>EXISTING GRASS SWALES ARE STABLE</u>		
<u>DA MAY NEED TO BE REVISED B/C SECOND INFLOW (DITCH)</u>		
<u>SLURRY DOESN'T REACH FACILITY</u>		
Proposed Treatment Option:		
<input type="checkbox"/> Extended Detention	<input type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland
<input checked="" type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale
	<input type="checkbox"/> Bioretention	<input type="checkbox"/> Other: _____

Unique Site ID: 672

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

INSTALL FOREBAY
 EVALUATE SAND FILTER AS RETROFIT
 OPTION
 WILL NEED TO RETROFIT EMBANKMENT

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: SHA/340

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe:

Access:

No Constraints
 Constrained due to

- Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None
 Unknown

Yes	Possible	
<input type="checkbox"/>	<input type="checkbox"/>	Sewer
<input type="checkbox"/>	<input type="checkbox"/>	Water
<input type="checkbox"/>	<input type="checkbox"/>	Gas
<input type="checkbox"/>	<input type="checkbox"/>	Cable
<input type="checkbox"/>	<input type="checkbox"/>	Electric
<input type="checkbox"/>	<input type="checkbox"/>	Electric to Streetlights
<input type="checkbox"/>	<input type="checkbox"/>	Overhead Wires
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____

Potential Permitting Factors:

- | | | |
|------------------------------|-----------------------------------|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

Other factors: _____

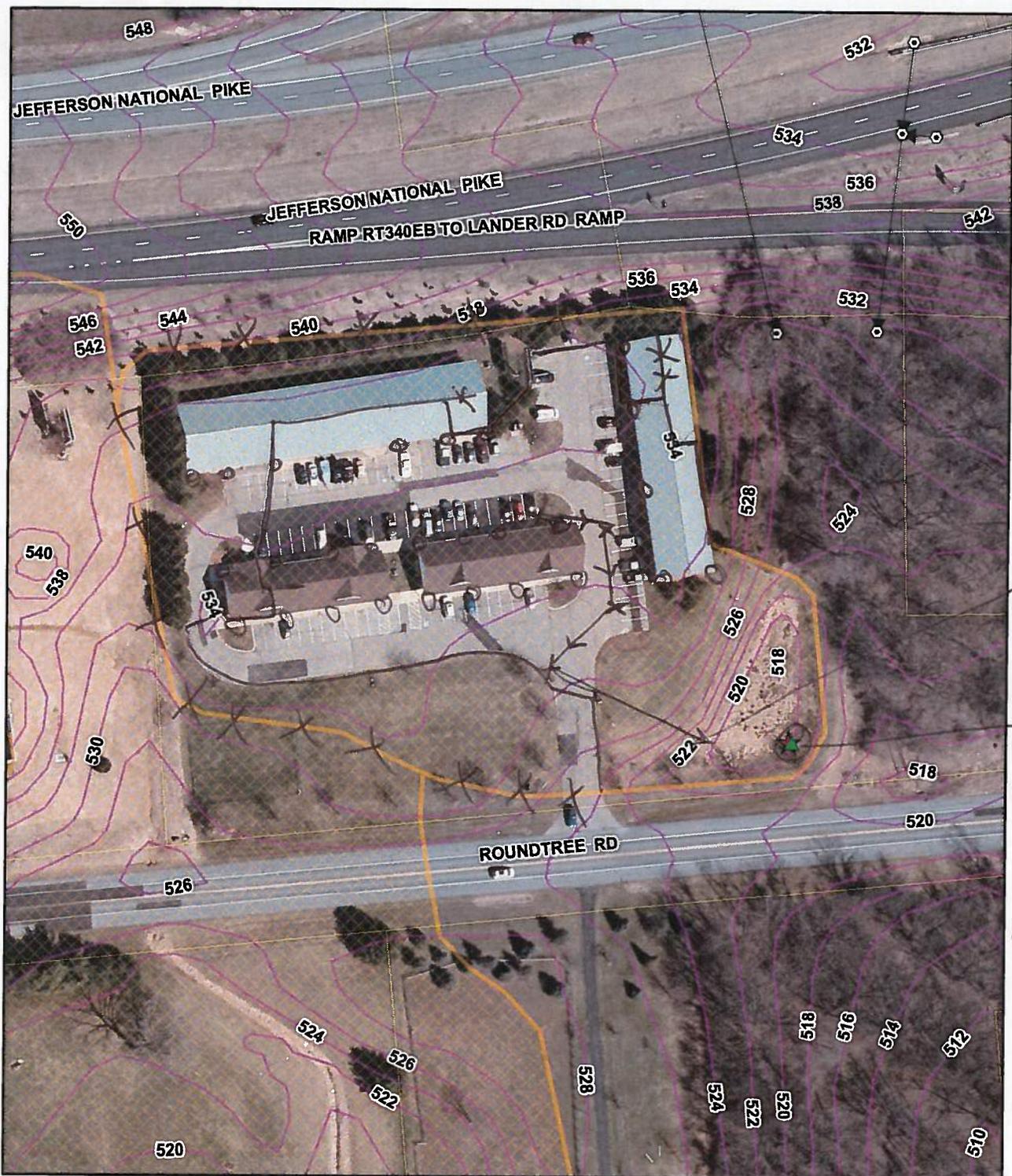
FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|--|--|
| <input checked="" type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input checked="" type="checkbox"/> Confirm volume computations | <input type="checkbox"/> Obtain utility mapping |
| <input checked="" type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input checked="" type="checkbox"/> Confirm soil types |

Unique Site ID: 672

Restoration Site 695

ROUNDTREE &
LANDER RD



24" RCP
FILLED
w/ FINE
GRAVEL

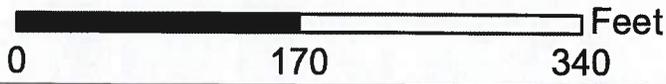
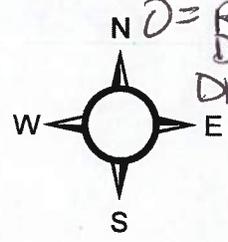
CONCRETE
RIVER
w/ TRASS
PACK
24"
OUTFALL
LOW
FLOW
3"



Catoctin Creek Watershed Assessment



- ▲ Existing BMP
- ⊙ SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- ▭ Parcel Boundaries
- Restoration Opp



X = INLET
O = ROOF
DRAINS
DISCONNECT

WATERSHED: <u>CATO</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>695</u>	
DATE: <u>5/30/18</u>		ASSESSED BY: <u>MV, JS</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership: <input type="checkbox"/> Public <input checked="" type="checkbox"/> Private <input type="checkbox"/> Unknown					
If Public, Government Jurisdiction: <input type="checkbox"/> Local <input type="checkbox"/> State <input type="checkbox"/> DOT <input type="checkbox"/> Other: _____					
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond			<input type="checkbox"/> Hotspot Operation		
<input type="checkbox"/> Below Outfall			<input type="checkbox"/> Small Parking Lot		
<input type="checkbox"/> In Road ROW			<input type="checkbox"/> Individual Street		
<input type="checkbox"/> Other: _____			<input type="checkbox"/> Underground		
<input type="checkbox"/> Above Roadway Culvert			<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> In Conveyance System			<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> Near Large Parking Lot			<input type="checkbox"/> Landscape / Hardscape		
			<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>2.15 ac.</u>			Drainage Area Land Use:		
Imperviousness = _____ %			<input type="checkbox"/> Residential		
Impervious Area = _____			<input type="checkbox"/> Institutional		
Notes:			<input type="checkbox"/> SFH (< 1 ac lots)		
			<input type="checkbox"/> SFH (> 1 ac lots)		
			<input type="checkbox"/> Townhouses		
			<input type="checkbox"/> Multi-Family		
			<input checked="" type="checkbox"/> Commercial		
			<input type="checkbox"/> Other: _____		
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possible					
If Yes, Describe:					
<p>Extended detention dry pond</p> <p>- Two inlets: one 24" RCP filled with fine gravel and one ditch that is having headcutting issues w/ trash rack</p> <p>- concrete riser has 3" low flow orifice and 24" RCP principal spillway pipe</p> <p>- could not access outfall through brush</p>					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
<p>- outfalls into existing ephemeral channel that recently overtopped Roundtree road and damaged the pavement and culvert.</p> <p>Photos sent to Don Dorsey.</p>					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention <input type="checkbox"/> Wet Pond <input type="checkbox"/> Created Wetland <input checked="" type="checkbox"/> Bioretention					
<input checked="" type="checkbox"/> Filtering Practice <input type="checkbox"/> Infiltration <input type="checkbox"/> Swale <input type="checkbox"/> Other: _____					

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- Add forebays at inlets

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Access:

- No Constraints
 Constrained due to
 Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No
If Yes, Describe:

Conflicts with Existing Utilities:

- None
 Unknown

Yes	Possible	
<input type="checkbox"/>	<input type="checkbox"/>	Sewer
<input type="checkbox"/>	<input type="checkbox"/>	Water
<input type="checkbox"/>	<input type="checkbox"/>	Gas
<input type="checkbox"/>	<input type="checkbox"/>	Cable
<input type="checkbox"/>	<input type="checkbox"/>	Electric
<input type="checkbox"/>	<input type="checkbox"/>	Electric to Streetlights
<input type="checkbox"/>	<input type="checkbox"/>	Overhead Wires
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____

Potential Permitting Factors:

- | | | |
|------------------------------|--|--|
| Dam Safety Permits Necessary | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

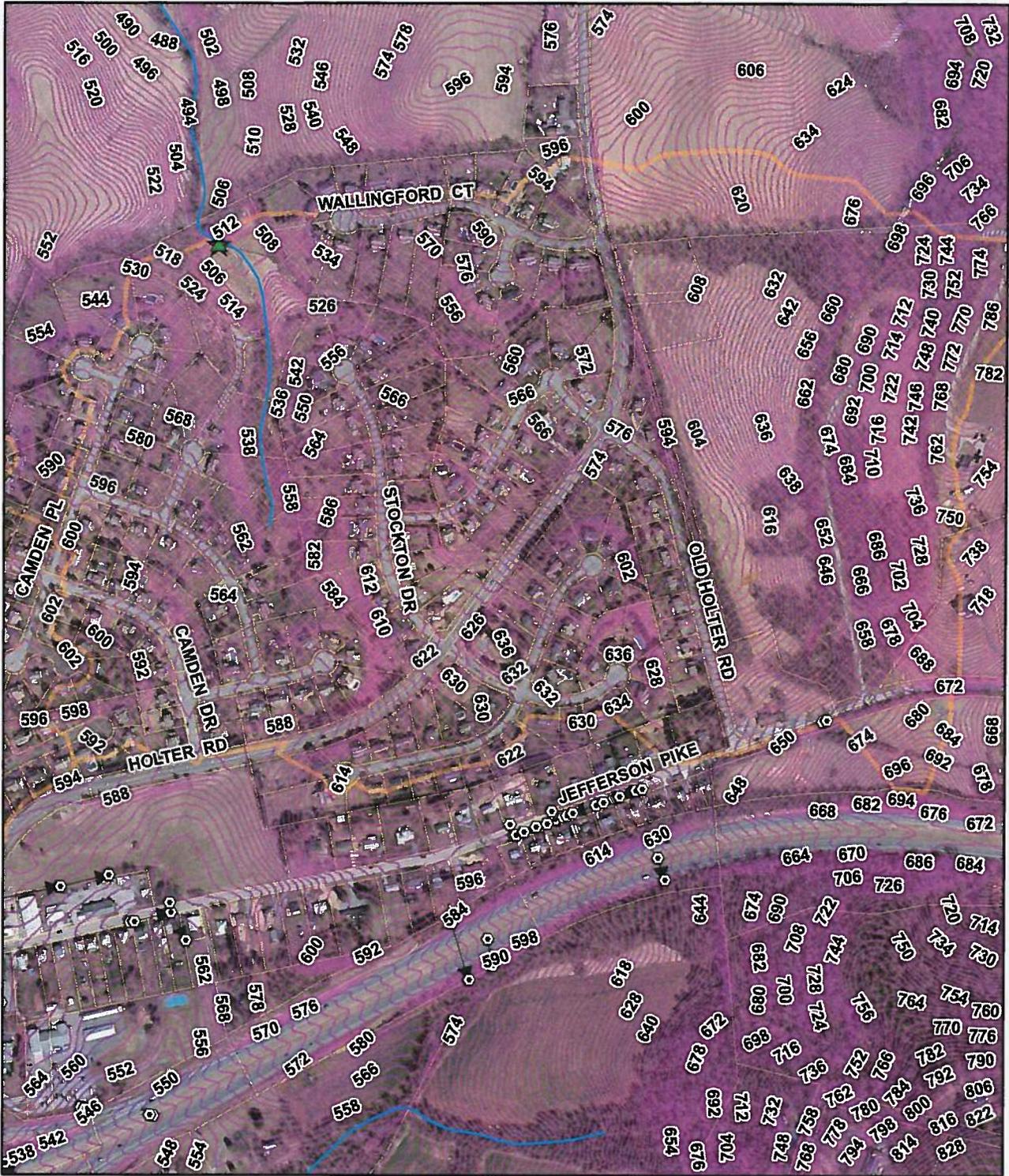
Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|---|---|
| <input type="checkbox"/> Confirm property ownership | <input checked="" type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input type="checkbox"/> Confirm drainage area | <input checked="" type="checkbox"/> Obtain site as-builts |
| <input type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input type="checkbox"/> Confirm volume computations | <input checked="" type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

Unique Site ID: _____

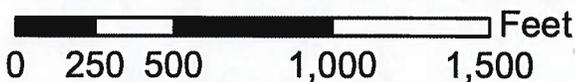
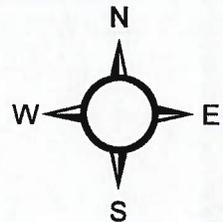
Restoration Site 752



Catoctin Creek Watershed Assessment



- ▲ Existing BMP
- ⊙ SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- ▭ Parcel Boundaries
- Restoration Opp



★ Downstream of pond
Stream Restoration

Inflow #2

Heavy trees & veg
Standing water

Inflow #3

Flowing water
Heavy trees
debris
bank erosion

Inflow #4

minor veg

Inflow #5

heavy trees

2 Pilot channel

veg
trees in channel

Animal burrow around riser

Debris on embankment
on riser

Manhole cover missing on riser

low flow buried under debris

WATERSHED: CATO		SUBWATERSHED:	UNIQUE SITE ID: 722
DATE: 6/5/18	ASSESSED BY: MV, VH		PICTURES:
LAT:		LONG:	
SITE DESCRIPTION			
Name: _____ Address: _____			
Ownership:		<input type="checkbox"/> Public	<input type="checkbox"/> Private
If Public, Government Jurisdiction:		<input type="checkbox"/> Local	<input type="checkbox"/> State
		<input type="checkbox"/> Unknown	<input type="checkbox"/> DOT
		<input checked="" type="checkbox"/> Other: Property Mgmt. People / HOA	
Proposed Retrofit Location:			
Storage		On-Site	
<input type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____
DRAINAGE AREA TO PROPOSED RETROFIT			
Drainage Area = 182.63 ac.		Drainage Area Land Use:	
Imperviousness = _____ %		<input type="checkbox"/> Residential	<input type="checkbox"/> Institutional
Impervious Area = 24.19 ac.		<input checked="" type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial
		<input type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related
		<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park
		<input type="checkbox"/> Multi-Family	<input checked="" type="checkbox"/> Undeveloped
		<input type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____
Notes:			
EXISTING STORMWATER MANAGEMENT			
Existing Stormwater Practice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possible			
If Yes, Describe:			
An existing in-stream extended detention "dry" pond (EODD) with five inlets: <ul style="list-style-type: none"> • Three are riprap channels • Two are riprap/natural VWS channels - Control structure is a concrete riser with a 7" x 7" low flow orifice draining a 6" perforated PVC downspout pipe. Principal spillway is a 60" RCP pipe that discharges to a plunge pool. An emergency spillway exits the NE side of the facility and eventually ends at the same plunge pool.			
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:			
Discharges to a plunge pool. An emergency spillway exits the NE side of the facility and eventually ends at the same plunge pool.			
Proposed Treatment Option:			
<input type="checkbox"/> Extended Detention	<input type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input type="checkbox"/> Other: _____

↗
Discuss with Jessica

Discuss with Jessica

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

SITE CONSTRAINTS

Adjacent Land Use:

- Residential
- Commercial
- Institutional
- Industrial
- Transport-Related
- Park
- Undeveloped
- Other: Sanitary Pump Station

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe:

Access:

No Constraints

Constrained due to

- Slope
- Space
- Utilities
- Tree Impacts
- Structures
- Property Ownership
- Other: _____

Conflicts with Existing Utilities:

- None
- Unknown

Yes	Possible	
<input type="checkbox"/>	<input type="checkbox"/>	Sewer
<input type="checkbox"/>	<input type="checkbox"/>	Water
<input type="checkbox"/>	<input type="checkbox"/>	Gas
<input type="checkbox"/>	<input type="checkbox"/>	Cable
<input type="checkbox"/>	<input type="checkbox"/>	Electric
<input type="checkbox"/>	<input type="checkbox"/>	Electric to Streetlights
<input type="checkbox"/>	<input type="checkbox"/>	Overhead Wires
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____

Potential Permitting Factors:

- Dam Safety Permits Necessary Probable Not Probable
 - Impacts to Wetlands Probable Not Probable
 - Impacts to a Stream Probable Not Probable
 - Floodplain Fill Probable Not Probable
 - Impacts to Forests Probable Not Probable
 - Impacts to Specimen Trees Probable Not Probable
- How many? _____
Approx. DBH _____

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- Confirm property ownership
- Confirm drainage area
- Confirm drainage area impervious cover
- Confirm volume computations
- Complete concept sketch
- Other: _____
- Obtain existing stormwater practice as-builts
- Obtain site as-builts
- Obtain detailed topography
- Obtain utility mapping
- Confirm storm drain invert elev.
- Confirm soil types

Unique Site ID: _____

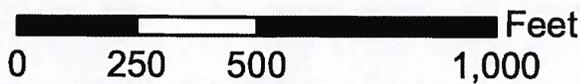
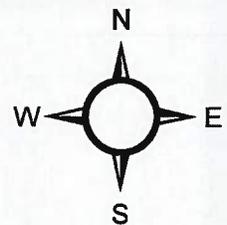
Restoration Site 1163



Catoctin Creek Watershed Assessment



- ▲ Existing BMP
- ⊙ SW Structure
- ★ Restoration Opp
- ▨ BMP DA
- ▭ Parcel Boundaries
- Restoration Opp



Inflow #1

nirap ditch

culvert @ southridge ~~2~~ triple 24" RCP w/ concrete headwall

Inflow #2

nirap ditch

Inflow #3

nirap ditch

Inflow #4

severe erosion

nirap ditch

culvert @ saratoga springs double ^{2'4" x 3'5"} RCP w/ concrete headwall

Control Structure

concrete weir

6" PVC low flow

plung pool w/ nirap outfall

1st	2'	} weir notches
2nd	6'	
3rd	10'	
Full	34'	

WATERSHED: <u>CATO</u>		SUBWATERSHED:		UNIQUE SITE ID: <u>11603</u>	
DATE: <u>6/5/18</u>		ASSESSED BY: <u>MYVH</u>		PICTURES:	
LAT:			LONG:		
SITE DESCRIPTION					
Name: _____					
Address: _____					
Ownership:		<input type="checkbox"/> Public	<input checked="" type="checkbox"/> Private	<input type="checkbox"/> Unknown	<u>likely owned by HOA</u>
If Public, Government Jurisdiction:		<input type="checkbox"/> Local	<input type="checkbox"/> State	<input type="checkbox"/> DOT	<input type="checkbox"/> Other: _____
Proposed Retrofit Location:					
Storage			On-Site		
<input checked="" type="checkbox"/> Existing Pond	<input type="checkbox"/> Above Roadway Culvert	<input type="checkbox"/> Hotspot Operation	<input type="checkbox"/> Individual Rooftop		
<input type="checkbox"/> Below Outfall	<input type="checkbox"/> In Conveyance System	<input type="checkbox"/> Small Parking Lot	<input type="checkbox"/> Small Impervious Area		
<input type="checkbox"/> In Road ROW	<input type="checkbox"/> Near Large Parking Lot	<input type="checkbox"/> Individual Street	<input type="checkbox"/> Landscape / Hardscape		
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Underground	<input type="checkbox"/> Other: _____		
DRAINAGE AREA TO PROPOSED RETROFIT					
Drainage Area = <u>80.09</u>		Drainage Area Land Use:			
Imperviousness = _____ %		<input checked="" type="checkbox"/> Residential	<input type="checkbox"/> Institutional		
Impervious Area = _____ <u>need to calculate</u>		<input checked="" type="checkbox"/> SFH (< 1 ac lots)	<input type="checkbox"/> Industrial		
Notes:		<input checked="" type="checkbox"/> SFH (> 1 ac lots)	<input type="checkbox"/> Transport-Related		
		<input type="checkbox"/> Townhouses	<input type="checkbox"/> Park		
		<input type="checkbox"/> Multi-Family	<input type="checkbox"/> Undeveloped		
		<input type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____		
EXISTING STORMWATER MANAGEMENT					
Existing Stormwater Practice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possible					
If Yes, Describe:					
<p><u>Existing extended detention wet pond (PWED) with four inlets:</u></p> <ul style="list-style-type: none"> <u>• Four r.rap ditches, one of which has severe erosion.</u> <p><u>- Control structure is a concrete weir with a 6" low flow orifice attached to a PVC PIPE. Discharges to a plunge pool, which discharges to an eroded r.rap outfall channel.</u></p>					
Describe Existing Site Conditions, Including Existing Site Drainage and Conveyance:					
Proposed Treatment Option:					
<input type="checkbox"/> Extended Detention	<input checked="" type="checkbox"/> Wet Pond	<input type="checkbox"/> Created Wetland	<input type="checkbox"/> Bioretention		
<input type="checkbox"/> Filtering Practice	<input type="checkbox"/> Infiltration	<input type="checkbox"/> Swale	<input type="checkbox"/> Other: _____		

Unique Site ID: _____

Describe Elements of Proposed Retrofit, Including Surface Area, Maximum Depth of Treatment, and Conveyance:

- Modify weir or storage area to allow for additional storage if facility is not already providing an 1" of treatment.

SITE CONSTRAINTS

Adjacent Land Use:

- Residential Commercial Institutional
 Industrial Transport-Related Park
 Undeveloped Other: _____

Possible Conflicts Due to Adjacent Land Use? Yes No

If Yes, Describe: *Likely need to cross through back yards of surrounding residential properties to access*

Access:

No Constraints

Constrained due to

- Slope Space
 Utilities Tree Impacts
 Structures Property Ownership
 Other: _____

Conflicts with Existing Utilities:

- None
 Unknown *None observed*

- | Yes | Possible | |
|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Sewer |
| <input type="checkbox"/> | <input type="checkbox"/> | Water |
| <input type="checkbox"/> | <input type="checkbox"/> | Gas |
| <input type="checkbox"/> | <input type="checkbox"/> | Cable |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric |
| <input type="checkbox"/> | <input type="checkbox"/> | Electric to Streetlights |
| <input type="checkbox"/> | <input type="checkbox"/> | Overhead Wires |
| <input type="checkbox"/> | <input type="checkbox"/> | Other: _____ |

Potential Permitting Factors:

- | | | |
|------------------------------|--|--|
| Dam Safety Permits Necessary | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to Wetlands | <input checked="" type="checkbox"/> Probable | <input type="checkbox"/> Not Probable |
| Impacts to a Stream | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Floodplain Fill | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Forests | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| Impacts to Specimen Trees | <input type="checkbox"/> Probable | <input checked="" type="checkbox"/> Not Probable |
| How many? _____ | | |
| Approx. DBH _____ | | |

Other factors: _____

FOLLOW-UP NEEDED TO COMPLETE FIELD CONCEPT

- | | |
|--|--|
| <input type="checkbox"/> Confirm property ownership | <input type="checkbox"/> Obtain existing stormwater practice as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area | <input type="checkbox"/> Obtain site as-builts |
| <input checked="" type="checkbox"/> Confirm drainage area impervious cover | <input type="checkbox"/> Obtain detailed topography |
| <input checked="" type="checkbox"/> Confirm volume computations | <input checked="" type="checkbox"/> Obtain utility mapping |
| <input type="checkbox"/> Complete concept sketch | <input type="checkbox"/> Confirm storm drain invert elev. |
| <input type="checkbox"/> Other: _____ | <input type="checkbox"/> Confirm soil types |

Unique Site ID: _____