

Wet Pond Inspection Report									
Facility Name	Sumner Pond		Facility ID	STMF0090056	Type of Inspection: Initial Inspection				
Location	Lat: 38.774472 Long: -77.477521		Watershed	Middle Bull Run	Previous 48 Hour Precipitation Total	0.00"			
Materials available for inspection	N/A		Owner Notification Date	N/A	Owners/Owner's Representative	City of Manassas			
Inspector	gky_n	nfreeman	Date of Inspection	6/27/2023	Date of Last Inspection	5/19/2022			
	Overall Condition Score								
	1	Adequate		No deficiencies identified.					
	2	Monitor		No maintenance may be needed at the time, but might become an issue in the future. Will revisit next inspection. Examples include minor erosion, small sediment accumulation, or small structural issues of facility components.					
3	3	Routine Maintenance Needed		Facility is functional but preventative maintenance is required. Examples includes vegetation management, minor erosion, or trash/debris removal.					
	4	Immediate Repair Needed		Facility is close to or currently not carrying out intended function. Examples include major erosion, significant sediment accumulation, or structural component failure. Repair Immediately					
	N/A	Not A	pplicable	Does not pertain to this facility.					
Remarks									

Inflow 7, the pipe appears to be at least partially collapsed and obstructing flow. Immediate repair is needed at this location.

	Inspection Items								
Score	Description	Comment(s) / Corrective Action(s)	Reference Image						
Overall									
1	Inadequate access to complete thorough								
	inspection Fences are damaged or have vegetation								
1	growing on them								
1	Missing or damaged safety signage								
1	Mosquitos								
1	Surrounding drainage area trash/debris/unauthorized substances that might affect facility								
1	Surrounding drainage area erosion that might be related to facility								
	P	re-Treatment							
1	Buildup of trash or debris								
1	Signs of erosion or exposed soil								
1	Sediment in forebay has reached 50% or more of capacity								
1	Evidence of clogging								
1	Vegetation does not match original design								
		Inlet							
3	Buildup of trash, debris, and sediment	Inflow 2 (16cf), Inflow 3 (6cf), Inflow 5 (20cf), and Inflow 7 (8cf).	4379, 4380, 4381, 4384, 4385, 4396, 4411						
3	Evidence of erosion or undermining around inlet	Inflow 9 (24cf)	4420						
3	Woody growth around inlet structure	Inflow 4 (1, 2-6" tree)	4391						
1	Evidence of nuisance animals								
4	Damage to inlet pipe or structure	Inflow 3, the pipe is breached and bedding material is visible. Inflow 7, the pipe appears to be collapsed.	4385, 4411						



HISTORIE HEART, MODERN BEAT,								
Score	Description	Comment(s) / Corrective Action(s)	Reference Image					
		des emergency spillway if applicable)						
1	Woody vegetation on embankment							
1	Shrubbery, low growing vegetation, and/or							
	vine material growing on embankment							
1	Sparse vegetative coverage							
1	Signs of erosion, settlement, piping, or slope slippage							
1	Signs of seepage, soft spots, and sinkhole formation							
1	Evidence of nuisance animals							
1	Buildup of trash or debris on embankment							
-	Trash, debris, or obstructions in emergency							
1	spillway							
	Outle	et/Riser Structure						
1	Low-flow orifice is blocked							
1	BMP device is deteriorated, misaligned, and/or damaged							
1	BMP device is missing							
	Low-level gate drain is accessible and							
1	operational. Drain has been exercised in last three years.							
3	Trash, debris, or other material in BMP device	Buckets, scaffolding, and various pieces of equipment observed inside the Control Str.	4352, 4355, 4357, 4358, 4359, 4360, 4361					
	Princ	ipal Spillway Pipe						
1	Spillway is blocked by debris or sediment							
1	Evidence of leaking joints							
	One or more sections of the pipe have settled							
1	to the point that it threatens the integrity of							
	the dam	l ent Area and Side Slopes						
1	Buildup of trash and debris	The Area and Side Slopes						
	·							
1	Silt and sedimentation buildup							
1	Ponding area is showing signs of poor health (i.e. nutrient overload, excess aquatic							
1	vegetation, or turbidity) Signs of erosion along shoreline							
1	Sparse vegetation or erosion							
1	Evidence of nuisance animals							
		twisture and Channel						
4		tructure and Channel						
1	Outfolk structure has congreted many than							
1	Outfall structure has separated more than three inches from principal spillway barrel							
1	Outfall structure is damaged or rusting							
1	Woody vegetation growing within 5' of outlet							
_	and barrel Buildup of trash, debris, and sediment							
1	around outfall or in channel							
1	Signs of erosion around outfall or channel							

Facility ID: STMF0090056 Inspection Date: 06/27/2023





4347: Control Str., overall.



4348: Control Str., Weir overall.



4349: Control Str., Weir closeup.



4350: Control Str., Dewatering valve.



4352: Inside Control Str., looking toward dewatering valve orifice. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4355: Inside Control Str., closeup of dewatering valve orifice. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4357: Inside Control Str., Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4358: Inside Control Str., Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4359: Inside Control Str., Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4360: Inside Control Str., looking downstream, North pipe. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4361: Inside Control Str., looking downstream, middle pipe. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4362: Inside Control Str., looking downstream, South pipe.



4363: Dam, overall.



4364: Dam, overall.



4365: Dam, overall.



4366: Dam, overall.



4367: Outfall, front.



4368: Inside Outfall, North pipe.



4369: Inside Outfall, middle pipe.



4370: Inside Outfall, South pipe.



4371: From Outfall, looking downstream.



4372: Inflow 1, front.



4373: Inside Inflow 1.



4374: From Inflow 1, looking downstream.



4375: Facility overall.



4376: Facility overall.



4377: Facility overall.



4378: Facility overall.



4379: Inflow 2, front. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4380: Inside Inflow 2. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4381: From Inflow 2, looking downstream. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4382: Impoundment area, overall.



4383: Sign 1, closeup.



4384: Inflow 3, front. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4385: Inside Inflow 3. Buildup of trash, debris, and sediment. Damage to pipe interior noted (Routine Maintenance Needed).



4386: From Inflow 3, looking downstream.



4387: Facility overall.



4388: Impoundment area, overall.



4389: Facility overall.



4390: Facility overall.



4391: Inflow 4, front. Woody growth around inlet structure (Routine Maintenance Needed).



4392: Inside Inflow 4.



4393: From Inflow 4, looking downstream.



4394: Facility overall.



4395: From Inflow 5, looking upstream.



4396: From Inflow 5, looking downstream. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4397: Facility, overall.



4398: Inflow 6, front.



4399: Inside Inflow 6.



4400: From Inflow 6, looking downstream.



4401: Impoundment area, overall.



4402: Facility overall.



4403: Facility overall.



4404: Facility overall.



4405: Facility overall.



4406: Facility overall.



4407: Impoundment area, overall.



4408: Facility overall.



4409: Facility overall.



4410: Inflow 7, front.



4411: Inside Inflow 7. Buildup of trash, debris, and sediment. Pipe appears to be collapsed (Immediate Repair Needed).



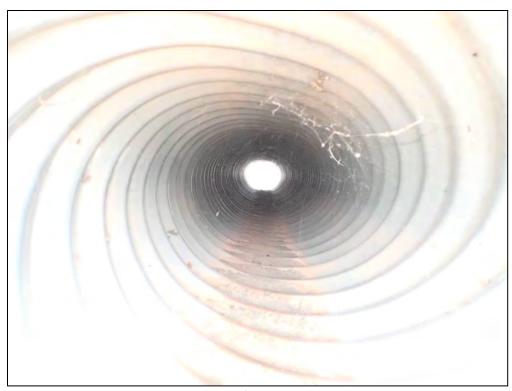
4412: From Inflow 7, looking downstream.



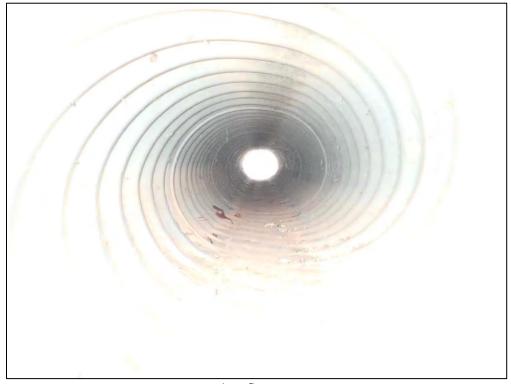
4413: Inflow 8, front.



4414: Inside Inflow 8, East pipe.



4415: Inside Inflow 8, Middle pipe.



4416: Inside Inflow 8, West pipe.



4417: From Inflow 8, looking downstream.



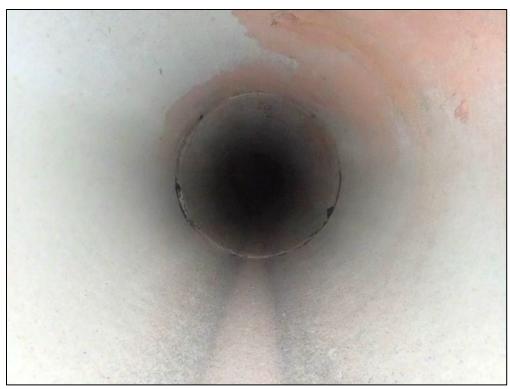
4418: Impoundment area, overall.



4419: Inflow 9, front.



4420: Inflow 9, closeup. Evidence of erosion or undermining around inlet (Routine Maintenance Needed).



4421: Inside Inflow 9.



4422: From Inflow 9, looking downstream.



4423: Sign 2, closeup.



Wet Pond Inspection Report								
Facility Name	Public Works		Facility ID	STMF0090057	Type of Inspection: Initial Inspection			
Location	Lat: 38.770973 Long: -77.462002		Watershed	Middle Bull Run	Previous 48 Hour Precipitation Total	0.00"		
Materials available for inspection	N/A		Owner Notification Date	N/A	Owners/Owner's Representative	City of Manassas		
Inspector	gky_n	nfreeman	Date of Inspection	6/28/2023	Date of Last Inspection	3/29/2021		
Overall Condition Score								
	1	Adequate		No deficiencies identified.				
	2	Monitor		No maintenance may be needed at the time, but might become an issue in the future. Will revisit next inspection. Examples include minor erosion, small sediment accumulation, or small structural issues of facility components.				
3	3	Routine Maintenance Needed		Facility is functional but preventative maintenance is required. Examples includes vegetation management, minor erosion, or trash/debris removal.				
	4	Immediate Repair Needed		Facility is close to or currently not carrying out intended function. Examples include major erosion, significant sediment accumulation, or structural component failure. Repair Immediately				
	N/A	Not A	pplicable	Does not pertain to this facility.				
Remarks								

Kemark

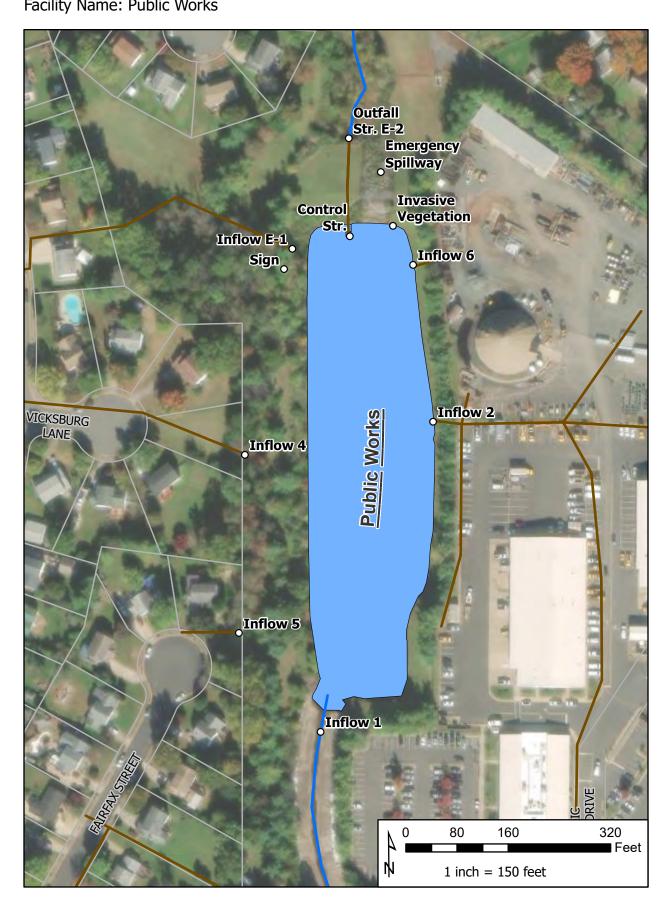
An Invasive Species (Trapa) was noted within the pond at the time of inspection.

	Inspection Items								
Score	Description	Comment(s) / Corrective Action(s)	Reference Image						
Overall									
1	Inadequate access to complete thorough inspection								
1	Fences are damaged or have vegetation growing on them								
3	Missing or damaged safety signage	Replace the damaged sign.	4865						
1	Mosquitos								
1	Surrounding drainage area trash/debris/unauthorized substances that might affect facility								
1	Surrounding drainage area erosion that might be related to facility								
	P	Pre-Treatment							
1	Buildup of trash or debris								
1	Signs of erosion or exposed soil								
1	Sediment in forebay has reached 50% or more of capacity								
1	Evidence of clogging								
1	Vegetation does not match original design								
		Inlet							
1	Buildup of trash, debris, and sediment								
1	Evidence of erosion or undermining around inlet								
1	Woody growth around inlet structure								
1	Evidence of nuisance animals								
3	Damage to inlet pipe or structure	Spalling/deterioration at Inflow 2 and Inflow 6.	4827, 4828, 4875						



Score	Description	Comment(s) / Corrective Action(s)	Reference Image								
	·	les emergency spillway if applicable)	·								
1	Woody vegetation on embankment										
3	Shrubbery, low growing vegetation, and/or vine material growing on embankment	Remove the vegetation growing in the Emergency Spillway.	4855, 4856, 4857, 4858, 4859								
1	Sparse vegetative coverage										
1	Signs of erosion, settlement, piping, or slope slippage										
1	Signs of seepage, soft spots, and sinkhole formation										
1	Evidence of nuisance animals										
1	Buildup of trash or debris on embankment										
1	Trash, debris, or obstructions in emergency spillway										
	Outlet/Riser Structure										
1	Low-flow orifice is blocked										
1	BMP device is deteriorated, misaligned, and/or damaged										
1	BMP device is missing										
1	Low-level gate drain is accessible and operational. Drain has been exercised in last three years.										
1	Trash, debris, or other material in BMP device										
	l Princi	pal Spillway Pipe									
1	Spillway is blocked by debris or sediment										
1	Evidence of leaking joints										
_	One or more sections of the pipe have settled										
1	to the point that it threatens the integrity of the dam										
		nt Area and Side Slopes									
1	Buildup of trash and debris										
1	Silt and sedimentation buildup										
4	Ponding area is showing signs of poor health (i.e. nutrient overload, excess aquatic vegetation, or turbidity)	Invasive Species Trapa.	4833, 4834, 4835								
1	Signs of erosion along shoreline										
1	Sparse vegetation or erosion										
1	Evidence of nuisance animals										
	Outfall St	ructure and Channel									
1	Outflow is causing undercutting or erosion										
1	Outfall structure has separated more than three inches from principal spillway barrel										
3	Outfall structure is damaged or rusting	Spalling on the western pipe face.	4848								
1	Woody vegetation growing within 5' of outlet and barrel										
1	Buildup of trash, debris, and sediment around outfall or in channel										
1	Signs of erosion around outfall or channel										

Facility ID: STMF0090057 Inspection Date: 06/28/2023 Facility Name: Public Works





4820: Facility overall.



4821: Inflow 1, looking upstream.



4822: Inflow 1, looking downstream.



4823: Facility overall.



4824: Facility overall.



4825: Inflow 2, front.



4826: Inflow 2, front.



4827: Inflow 2, closeup. Damage to inlet pipe or structure (Routine Maintenance Needed).



4828: Inflow 2, closeup. Damage to inlet pipe or structure, Spalling (Routine Maintenance Needed).



4829: Inside Inflow 2.



4830: From Inflow 2, looking downstream.



4831: Facility overall.



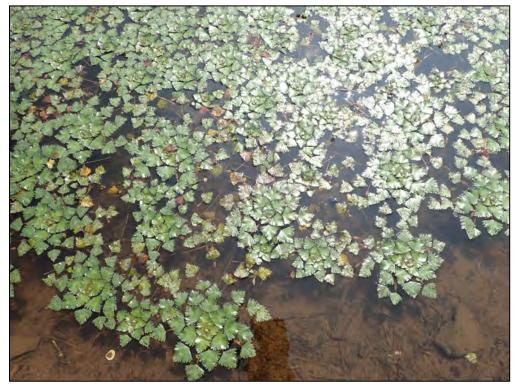
4832: Facility overall.



4833: Impoundment area, overall. Ponding area is showing signs of poor health (i.e., nutrient overload, excess aquatic vegetation, or turbidity), Invasive species Trapa sp. (Immediate Repair Needed).



4834: Impoundment area, overall. Ponding area is showing signs of poor health (i.e., nutrient overload, excess aquatic vegetation, or turbidity), Invasive species Trapa sp. (Immediate Repair Needed).



4835: Impoundment area, closeup. Ponding area is showing signs of poor health (i.e., nutrient overload, excess aquatic vegetation, or turbidity), Invasive species Trapa sp. (Immediate Repair Needed).



4836: Control Str., overall.



4837: Control Str., overall, Dewatering valve.



4838: Control Str., Top trash rack.



4839: Inside Control Str., closeup. BMP device is deteriorated, misaligned, and/or damaged (Immediate Repair Needed)



4840: Inside Control Str.



4841: Inside Control Str., looking upstream, Southeast upper orifices.



4842: Inside Control Str., looking upstream, Southwest upper orifices.



4843: Inside Control Str., looking upstream, West.



4844: Inside Control Str., looking upstream toward dewatering valve.



4845: Inside Control Str., looking downstream middle.



4846: Outfall Str. E-2, From dam.



4847: Outfall Str. E-2, front.



4848: Outfall Str. E-2, western pipe closeup. Outfall structure is damaged or rusting (Routine Maintenance Needed).



4849: Inside Outfall Str. E-2, West pipe.



4850: Inside Outfall Str. E-2, Middle pipe.



4851: Inside Outfall Str. E-2, East pipe.



4852: From Outfall Str. E-2, looking downstream.



4853: Dam overall.



4854: Dam overall.



4855: Emergency Spillway, overall. Shrubbery, low growing vegetation, and/or vine material growing on embankment (Routine Maintenance Needed).



4856: From Emergency Spillway, looking upstream. Shrubbery, low growing vegetation, and/or vine material growing on embankment (Routine Maintenance Needed).



4857: From Emergency Spillway, looking upstream. Shrubbery, low growing vegetation, and/or vine material growing on embankment (Routine Maintenance Needed).



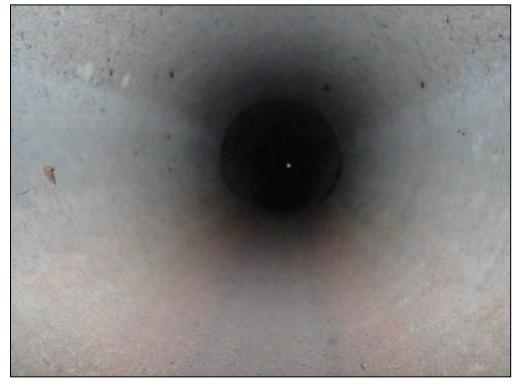
4858: From Emergency Spillway, looking downstream. Shrubbery, low growing vegetation, and/or vine material growing on embankment (Routine Maintenance Needed).



4859: From Emergency Spillway, looking downstream. Shrubbery, low growing vegetation, and/or vine material growing on embankment (Routine Maintenance Needed).



4860: Inflow Str. E-1, front.



4861: Inside Inflow Str. E-1.



4862: From Inflow Str. E-1, looking downstream.



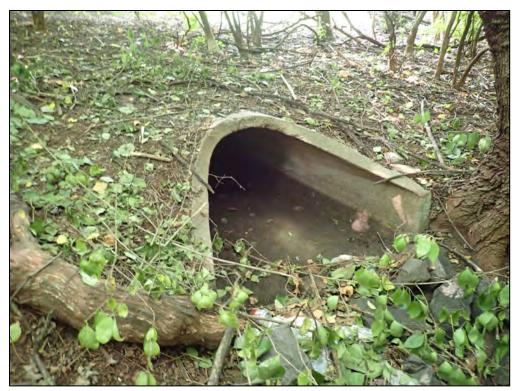
4863: Facility overall.



4864: Facility overall.



4865: Sign, closeup. Missing or damaged safety signage (Routine Maintenance Needed).



4866: Inflow 4, front.



4867: Inside Inflow 4.



4868: From Inflow 4, looking downstream.



4869: Inflow 5, front.



4870: Inside Inflow 5.



4871: From Inflow 5, looking downstream.



4872: From Inflow 5, looking downstream.



4873: Inside Control Str., looking downstream East.



4874: Inflow 6, front.



4875: Inflow 6, closeup. Damage to inlet pipe or structure (Routine Maintenance Needed).



4876: Inside Inflow 6.



4877: From Inflow 6, looking downstream.



HISTORIG HEART, MUDERN BEAT.								
			Wet Por	nd Inspection Report				
Facility Name	Point	of Woods	Facility ID	STMF0090058	Type of Inspection: Initial Inspection			
Location	Lat: 38.770328 Long: -77.462004		Watershed	Middle Bull Run	Previous 48 Hour Precipitation Total	0.35"		
Materials available for inspection	N/A		Owner Notification Date	N/A	Owners/Owner's Representative	City of Manassas		
Inspector	gky_n	nfreeman	Date of Inspection	6/29/2023	Date of Last Inspection 3/29/2021			
			Overa	ll Condition Score				
	1	Add	equate		No deficiencies identified.			
	2	M	onitor	the future. Will revisit	may be needed at the time, but might become an issue i revisit next inspection. Examples include minor erosion, ent accumulation, or small structural issues of facility components.			
3	3	Routine Main	Routine Maintenance Needed Facility is functional but preventative maintenance is required. Examples includes vegetation management, minor erosion, or trash/debris remova					
	4	Immediate	Repair Needed	include major erosion		intended function. Examples accumulation , or structural amediately		
	N/A Not Applicable Does not pertain to this facility.					facility.		
				Remarks				

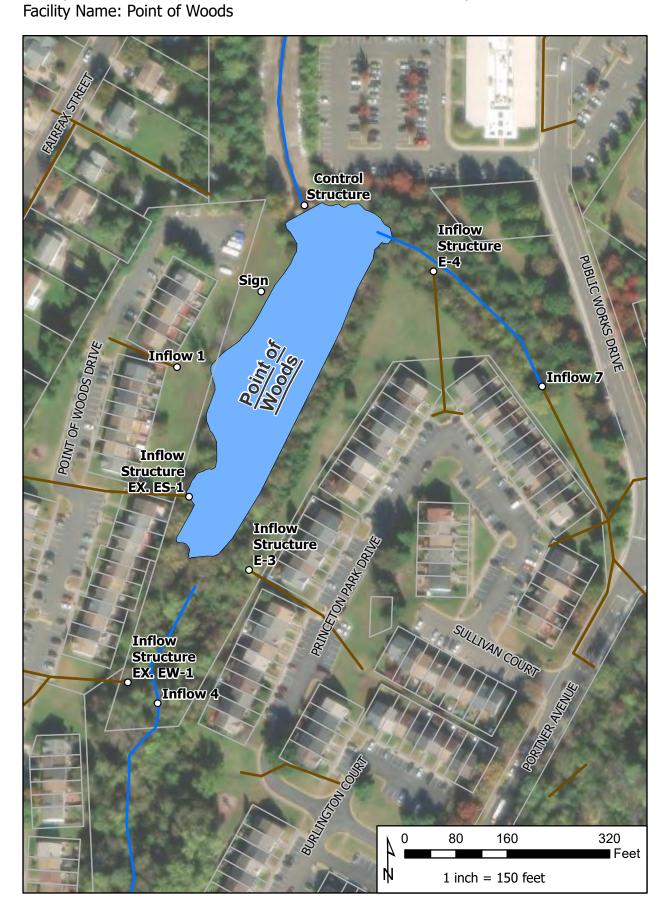
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	Inspection Items							
Score	Description	Comment(s) / Corrective Action(s)	Reference Image					
		Overall						
4	Inadequate access to complete thorough							
1	inspection							
4	Fences are damaged or have vegetation							
1	growing on them							
1	Missing or damaged safety signage							
1	Mosquitos							
	Surrounding drainage area							
1	trash/debris/unauthorized substances that							
	might affect facility Surrounding drainage area erosion that might							
1	be related to facility							
		re-Treatment						
1	Buildup of trash or debris							
1	Signs of erosion or exposed soil							
4	Sediment in forebay has reached 50% or							
1	more of capacity							
1	Evidence of clogging							
1	Vegetation does not match original design							
		Inlet						
4	Buildup of trash, debris, and sediment	Inflow 1 is almost fully blocked by sediment and debris (18 Cubic Feet).	4890, 4891, 4892					
4	Evidence of erosion or undermining around	and debris (16 edble reet).						
1	inlet							
		Trees observed growing adjacent to Inflow 2						
3	Woody growth around inlet structure	(6, 2-6" trees, 2, 7-12" trees, 1, 13-24" tree),	4895, 4896, 4897, 4898,					
		Inflow 3 (3, 2-6" tree and 1, 13-24" tree), and	4900, 4908					
1	Evidence of nuisance animals	Inflow 5 (1, 13-24" tree).						
т.	Evidence of fluisance affillidis	Challing was absorved on the nine force of						
3	Damage to inlet pipe or structure	Spalling was observed on the pipe face of Inflow 3. (1 Bag of Concrete)	4901					



Score	Description	Comment(s) / Corrective Action(s)	Reference Image
30310	·	des emergency spillway if applicable)	
1	Woody vegetation on embankment		
	Shrubbery, low growing vegetation, and/or		
1	vine material growing on embankment		
1	Sparse vegetative coverage		
1	Signs of erosion, settlement, piping, or slope		
	slippage Signs of seepage, soft spots, and sinkhole		
1	formation		
1	Evidence of nuisance animals		
1	Buildup of trash or debris on embankment		
1	Trash, debris, or obstructions in emergency		
	spillway Outle	 et/Riser Structure	
1	Low-flow orifice is blocked		
	BMP device is deteriorated, misaligned,		
1	and/or damaged		
1	BMP device is missing		
1	Low-level gate drain is accessible and operational. Drain has been exercised in last		
_	three years.		
1	Trash, debris, or other material in BMP device		
	Princ	ipal Spillway Pipe	
1	Spillway is blocked by debris or sediment		
1	Evidence of leaking joints		
	One or more sections of the pipe have settled		
1	to the point that it threatens the integrity of the dam		
		l ent Area and Side Slopes	
1	Buildup of trash and debris		
1	Silt and sedimentation buildup		
	Ponding area is showing signs of poor health		
1	(i.e. nutrient overload, excess aquatic		
	vegetation, or turbidity)		
1	Signs of erosion along shoreline		
1	Sparse vegetation or erosion		
1	Evidence of nuisance animals		
	Outfall S	tructure and Channel	
1	Outflow is causing undercutting or erosion		
1	Outfall structure has separated more than		
_	three inches from principal spillway barrel		
1	Outfall structure is damaged or rusting Woody vegetation growing within 5' of outlet		
1	and barrel		
1	Buildup of trash, debris, and sediment around outfall or in channel		
1	Signs of erosion around outfall or channel		

Facility ID: STMF0090058 Inspection Date: 06/29/2023





4878: Control Structure, Overall.



4879: Control Structure, Overall.



4880: Control Structure, weir close-up.



4881: Control Structure, looking upstream.



4882: From Control Structure, looking downstream.



4883: Control Structure, Overall.



4884: Facility Overall.



4885: Facility Overall.



4886: Sign, closeup.



4887: Facility Overall.



4888: Facility Overall.



4889: Inflow 1, front.



4890: Inflow 1, closeup. Buildup of trash, debris, and sediment (Immediate Repair Needed).



4891: Inside Inflow 1. Buildup of trash, debris, and sediment (Immediate Repair Needed).



4892: From Inflow 1, looking downstream. Buildup of trash, debris, and sediment (Immediate Repair Needed).



4893: Facility Overall.



4894: Facility Overall.



4895: Inflow Structure EX. ES-1, Overall. Woody growth around inlet structure (Routine Maintenance Needed).



4896: Inflow Structure EX. ES-1, Overall. Woody growth around inlet structure (Routine Maintenance Needed).



4897: Inflow Structure EX. ES-1, Overall. Woody growth around inlet structure (Routine Maintenance Needed).



4898: Inflow Structure EX. ES-1, Overall. Woody growth around inlet structure (Routine Maintenance Needed).



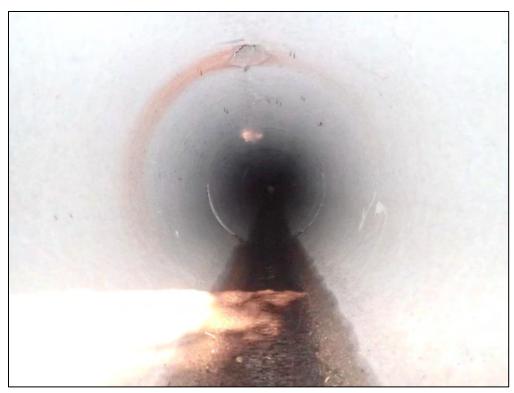
4899: Facility Overall.



4900: Inflow Structure EX. EW-1, front. Woody growth around inlet structure (Routine Maintenance Needed).



4901: Inflow Structure EX. EW-1, closeup. Damage to inlet pipe or structure, Spalling (Routine Maintenance Needed).



4902: Inside Inflow Structure EX. EW-1.



4903: From Inflow Structure EX. EW-1, looking downstream.



4904: Looking upstream along Inflow 4.



4905: From Inflow 4, looking downstream.



4906: Inflow Structure E-3, front.



4907: Inside Inflow Structure E-3.



4908: Inflow Structure E-3, closeup. Woody growth around inlet structure (Routine Maintenance Needed).



4909: From Inflow Structure E-3, looking downstream.



4910: Facility Overall.



4911: Facility Overall.



4912: Inflow Structure E-4, front.



4913: Inflow Structure E-4, closeup.



4914: Inflow Structure E-4, closeup.



4915: From Inflow Structure E-4, looking downstream.



4916: Inflow 7, front.



4917: Inside Inflow 7.



4918: From Inflow 7, looking downstream.



NON-ROUTINE MAINTENANCE COST ESTIMATE STMF0090058 / Point of Woods

FY2023 Public BMP Inspections

Date of Inspection: 06/29/2023
Date of Estimate: 09/01/2023
Estimate Prepared by: GKY

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	U	NIT PRICE		COST
	Mowing / Clearing						
1	(includes removal & proper disposal of all woody stock,		0.1 acre	\$	74.00	\$	-
	brush, & trees up to 2-inch diameter) Pond Control Structure/Riser Clearing						
	(includes removal & disposal of trash, debris, floatables, &						
2	other material from directly around and on top of the		CY	\$	30.00	\$	-
	control structure/riser)						
	Pond Low-Flow Channel Clearing (25' Radius)						
3	(includes removal & disposal of trash, debris, floatables, &		EA	\$	181.00	\$	_
J	other material from pond channels & trash rack within 25'		271		101.00	Ψ	
	radius of control structure/riser) Shoreline Clean-Up						
4	(includes removal & disposal of trash & debris from 15' of		0.1 acre	\$	750.00	\$	_
7	wet side and 15' of dry side of WSE)		0.1 0010	,	730.00	Ţ	
5	Trash/Debris Removal & Disposal		CY	\$	164.00	\$	-
6	Repair/Replace Facility Sign		EA	\$	247.00	\$	
7	Repair/Replace Facility Sign and Post Installation		EA	\$	329.00	\$	
16	Hydroseeder (400 - 600 Gallon) with Upland Seed Mix		HR	\$	217.00	\$	-
17	Hydroseeder (400 - 600 Gallon) with Wetland Seed Mix		HR	\$	411.00	\$	-
18	Hydroseeder (400 - 600 Gallon) w/ Co. Supplied Seed Mix		HR	\$	90.00	\$	-
	Pond Low-Flow Channel Clearing (per 25')						
29	(includes removal & disposal of sediment, trash, debris,		25 FT	\$	156.00	\$	_
23	floatables, & other material using handheld equipment from		2311	۲	130.00	۲	_
	the pond low-flow channel)						
30	Tree Removal (2" to 6" DBH)	9.00	EA	\$	1,316.00	\$	11,844.00
31	Tree Removal (7" to 12" DBH)	2.00	EA	\$	2,961.00	\$	5,922.00
32	Tree Removal (13" to 24" DBH)	3.00	EA	\$	4,930.00	\$	14,790.00
33	Tree Removal (25" to 36" DBH)		EA	\$	6,250.00	\$	-
34	Stump Removal & Grinding (up to 12")		EA	\$	576.00	\$	-
	Excavation of Sediment						
39	(includes removal & disposal of sediment from the bottom of		CY	\$	150.00	\$	-
	the existing pond using mechanical means; assumed			, T		7	
	potentially hazardous waste)		ГА	,	1 216 00	ć	
40	Animal Burrow Repair		EA	\$	1,316.00	\$	-
53	VDOT Class I Rip-Rap with Fabric Liner		TON	\$	156.00	\$	-
54	VDOT Class II Rip-Rap with Fabric Liner		TON	\$	176.00	\$	-
58	Concrete Removal and Disposal		SF	\$	39.00	\$	-
59	Grouting Cracks and Joints		LF	\$	189.00	\$	-
62	Parging (per 50lb bag)	1.00	EA	\$	452.00	\$	452.00
70	Seed Mix (includes straw mulch and water)		0.1 acre	\$	286.00	\$	-
79	Topsoil (3")		CY	\$	74.00	\$	-
N/A	Remove & Dispose of Sediment / Debris from Inside	18.00	CF	\$	30.00	\$	540.00
N/A	Drainage Structures and Pipes Install Grouted Class I Rip-Rap		SY	\$	90.00	\$	
N/A	Install Grouted Class II Rip-Rap		SY	\$	141.00	\$	_
N/A	Fabricate & Install Low-Flow BMP Plate		EA	\$	500.00	\$	-
N/A	Fabricate & Install Low-Flow Trash Rack		EA	\$	500.00	\$	-
	Install HR-2 Handrail		LF	\$	100.00	\$	-
N/A	install nk-z nandrali						
	Install Access Road Gate		EA	\$	2,100.00	\$	-
N/A				_	2,100.00 750.00	\$ \$	-

Sub-Total = \$ 33,548.00

Mobilization (5%) = \$ 1,677.40

Cost Estimate is for reference purposes only. Actual contractor costs may vary.



Wet Pond Inspection Report									
Facility Name	Winters I	Branch Pond	Facility ID	STMF0090059	Type of Inspection: Initial Inspection				
Location	Lat: 38.743451 Long: -77.490077		Watershed	Rocky Branch-Broad Run	Previous 48 Hour Precipitation Total	0.35"			
Materials available for inspection		N/A	Owner Notification Date	N/A	Owners/Owner's Representative	City of Manassas			
Inspector	gky_n	nfreeman	Date of Inspection	6/29/2023	Date of Last Inspection 6/18/2021				
Overall Condition Score									
	1	Ade	equate	No deficiencies identified.					
	2	М	onitor	No maintenance may be needed at the time, but might become an issue in the future. Will revisit next inspection. Examples include minor erosion, small sediment accumulation, or small structural issues of facility components.					
3	3	Routine Main	Routine Maintenance Needed Facility is functional but preventative maintenance is required. Examples includes vegetation management, minor erosion, or trash/debris removal.						
	4	Immediate Repair Needed Facility is close to or currently not carrying out intended function. Examp include major erosion, significant sediment accumulation, or structura component failure. Repair Immediately				accumulation , or structural			
	N/A	Not A	pplicable		oes not pertain to this	facility.			
	Remarks								

An Algal Bloom was observed at the water's edge around most of the pond. (Not included in the Cost Estimate)

	Ins	spection Items	
Score	Description	Comment(s) / Corrective Action(s)	Reference Image
		Overall	
1	Inadequate access to complete thorough		
-	inspection		
1	Fences are damaged or have vegetation		
_	growing on them		
1	Missing or damaged safety signage		
1	Mosquitos		
	Surrounding drainage area		
1	trash/debris/unauthorized substances that		
	might affect facility		
1	Surrounding drainage area erosion that might		
Т	be related to facility		
	P	re-Treatment	
1	Buildup of trash or debris		
1	Signs of erosion or exposed soil		
1	Sediment in forebay has reached 50% or		
Т	more of capacity		
1	Evidence of clogging		
1	Vegetation does not match original design		
		Inlet	
3	Buildup of trash, debris, and sediment	Debris accumulating adjacent to Inflow 2 (3 Cubic Feet).	4954
1	Evidence of erosion or undermining around	333.3.233	
4	inlet		
1	Woody growth around inlet structure		
1	Evidence of nuisance animals		
1	Damage to inlet pipe or structure		



Score	Description	Comment(s) / Corrective Action(s)	Reference Image
		des emergency spillway if applicable)	
1	Woody vegetation on embankment		
	Shrubbery, low growing vegetation, and/or		
1	vine material growing on embankment		
3	Sparse vegetative coverage	Bare spots observed on the dam, 70x4', 40x3' (400 Square Feet)	4946, 4948
1	Signs of erosion, settlement, piping, or slope slippage		
1	Signs of seepage, soft spots, and sinkhole formation		
1	Evidence of nuisance animals		
1	Buildup of trash or debris on embankment		
1	Trash, debris, or obstructions in emergency		
	spillway	et/Riser Structure	
4	Low-flow orifice is blocked		
1			
1	BMP device is deteriorated, misaligned, and/or damaged		
1	BMP device is missing		
т_	Low-level gate drain is accessible and		
1	operational. Drain has been exercised in last		
_	three years.		
3	Trash, debris, or other material in BMP device	Trash and debris were observed in and	4926, 4927
<u> </u>		adjacent to the trash rack (13 Cubic Feet).	4920, 4927
	Princ	ipal Spillway Pipe	
1	Spillway is blocked by debris or sediment		
1	Evidence of leaking joints		
	One or more sections of the pipe have settled		
1	to the point that it threatens the integrity of		
	the dam		
	<u> </u>	ent Area and Side Slopes	
1	Buildup of trash and debris		
1	Silt and sedimentation buildup		
	Ponding area is showing signs of poor health	An Algal Bloom was observed at the water's	
2	(i.e. nutrient overload, excess aquatic	edge around most of the pond.	4921, 4922, 4955, 4956
	vegetation, or turbidity)	g .	
1	Signs of erosion along shoreline		
1	Sparse vegetation or erosion		
1	Evidence of nuisance animals		
	Outfall St	tructure and Channel	
1	Outflow is causing undercutting or erosion		
1	Outfall structure has separated more than three inches from principal spillway barrel		
1	Outfall structure is damaged or rusting		
3	Woody vegetation growing within 5' of outlet and barrel	4, 2-6" trees observed growing adjacent to the outfall structure on the back slope of the dam.	4942, 4943
1	Buildup of trash, debris, and sediment around outfall or in channel		

Facility ID: STMF0090059 Inspection Date: 06/29/2023

Facility Name: Winters Branch Pond





4919: Facility Overall.



4920: Facility Overall.



4921: Impoundment area, Overall. The ponding area shows signs of poor health (i.e. nutrient overload, excess aquatic vegetation, or turbidity) (Monitor).



4922: Impoundment area, Overall. The ponding area shows signs of poor health (i.e. nutrient overload, excess aquatic vegetation, or turbidity) (Monitor).



4923: Facility Overall.



4924: Control Structure B, front.



4926: Control Structure B, trash rack close-up. Trash, debris, or other material in BMP device (Routine Maintenance Needed).



4927: Control Structure B, inside the trash rack. Trash, debris, or other material in BMP device (Routine Maintenance Needed).



4928: Control Structure B, looking toward the upper orifices.



4929: Control Structure B, looking toward the dewatering valve.



4930: Inside Control Structure B, looking toward the upstream end.



4931: Inside Control Structure B, looking toward the downstream end.



4932: Inside Control Structure B, looking upstream toward the dewatering orifice.



4933: Inside Control Structure B, close-up of the dewatering orifice.



4934: Inside Control Structure B, looking upstream toward the low-flow orifice.



4935: Inside Control Structure B, looking upstream inside the low-flow orifice.



4936: Inside Control Structure B, looking downstream.



4937: Facility overall.



4938: Inflow 1, front. Overgrown Vegetation (Routine Maintenance Needed).



4939: Inflow 1, closeup. Overgrown Vegetation (Routine Maintenance Needed).



4940: Inside Inflow 1.



4941: From Inflow 1, looking downstream.

Facility ID: STMF0090059

Facility Name: Winters Branch Pond



4942: Outfall Structure A, From dam. Woody vegetation growing within 5' of outlet and barrel (Routine Maintenance Needed).



4943: Outfall Structure A, front. Woody vegetation growing within 5' of outlet and barrel (Routine Maintenance Needed).



4944: Inside Outfall Structure A.



4945: From Outfall Structure A, looking downstream.



4946: Dam overall. Sparse vegetative coverage (Routine Maintenance Needed).



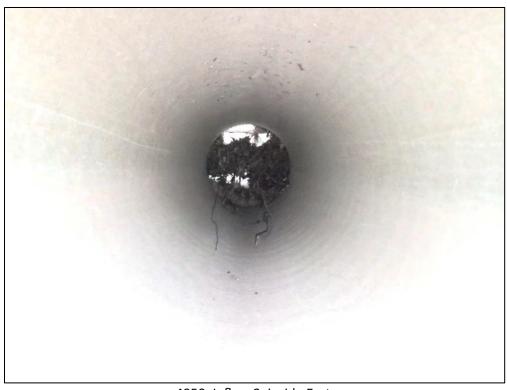
4947: Dam overall.



4948: Dam overall. Sparse vegetative coverage (Routine Maintenance Needed).



4949: Inflow 2, front.



4950: Inflow 2, inside East.



4951: Inflow 2, inside Middle.



4952: Inflow 2, inside West.



4953: From Inflow 2, looking downstream.



4954: Inflow 2, overall. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4955: Impoundment area, overall. The ponding area shows signs of poor health (i.e. nutrient overload, excess aquatic vegetation, or turbidity) (Monitor).



4956: Impoundment area, overall. The ponding area shows signs of poor health (i.e. nutrient overload, excess aquatic vegetation, or turbidity) (Monitor).



4957: Facility Overall.



4958: Facility Overall.



4959: Facility Overall.



4960: Looking upstream along Inflow 3.



4961: From Inflow 3, looking downstream.



NON-ROUTINE MAINTENANCE COST ESTIMATE STMF0090059/ Winters Branch Pond FY2023 Public BMP Inspections

Date of Inspection: 06/29/2023
Date of Estimate: 09/01/2023
Estimate Prepared by: GKY

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UI	NIT PRICE		COST
1	Mowing / Clearing (includes removal & proper disposal of all woody stock,		0.1 acre	\$	74.00	\$	-
	brush, & trees up to 2-inch diameter)						
	Pond Control Structure/Riser Clearing						
2	(includes removal & disposal of trash, debris, floatables, & other material from directly around and on top of the		CY	\$	30.00	\$	-
	control structure/riser)						
	Pond Low-Flow Channel Clearing (25' Radius)						
	(includes removal & disposal of trash, debris, floatables, &					_	
3	other material from pond channels & trash rack within 25'		EA	\$	181.00	\$	-
	radius of control structure/riser)						
	Shoreline Clean-Up		0.1.555	۲ ا	750.00	۲.	
4	(includes removal & disposal of trash & debris from 15' of wet side and 15' of dry side of WSE)		0.1 acre	\$	750.00	\$	-
5	Trash/Debris Removal & Disposal		CY	\$	164.00	\$	-
6	Repair/Replace Facility Sign		EA	\$	247.00	\$	-
7	Repair/Replace Facility Sign and Post Installation		EA	\$	329.00	\$	-
16	Hydroseeder (400 - 600 Gallon) with Upland Seed Mix		HR	\$	217.00	\$	-
	Hydroseeder (400 - 600 Gallon) with Wetland Seed Mix		HR	\$	411.00	\$	-
18	Hydroseeder (400 - 600 Gallon) w/ Co. Supplied Seed Mix		HR	\$	90.00	\$	-
	Pond Low-Flow Channel Clearing (per 25')						
	(includes removal & disposal of sediment, trash, debris,		25 FT	ے	156.00	\$	
	floatables, & other material using handheld equipment from		25 F I	\$	156.00	Ş	-
	the pond low-flow channel)						
30	Tree Removal (2" to 6" DBH)	4.00	EA	\$	1,316.00	\$	5,264.00
31	Tree Removal (7" to 12" DBH)		EA	\$	2,961.00	\$	-
32	Tree Removal (13" to 24" DBH)		EA	\$	4,930.00	\$	-
33	Tree Removal (25" to 36" DBH)		EA	\$	6,250.00	\$	-
34	Stump Removal & Grinding (up to 12")		EA	\$	576.00	\$	-
39	Excavation of Sediment (includes removal & disposal of sediment from the bottom of the existing pond using mechanical means; assumed potentially hazardous waste)		CY	\$	150.00	\$	-
40	Animal Burrow Repair		EA	\$	1,316.00	\$	-
53	VDOT Class I Rip-Rap with Fabric Liner		TON	\$	156.00	\$	-
54	VDOT Class II Rip-Rap with Fabric Liner		TON	\$	176.00	\$	-
58	Concrete Removal and Disposal		SF	\$	39.00	\$	-
59	Grouting Cracks and Joints		LF	\$	189.00	\$	-
62	Parging (per 50lb bag)		EA	\$	452.00	\$	-
70	Seed Mix (includes straw mulch and water)	0.10	0.1 acre	\$	286.00	\$	28.60
79	Topsoil (3")		CY	\$	74.00	\$	
	Remove & Dispose of Sediment / Debris from Inside	16.00	CF			\$	400.00
N/A	Drainage Structures and Pipes	16.00		\$	30.00		480.00
N/A	Install Grouted Class I Rip-Rap		SY	\$	90.00	\$	-
A1 / A	Install Grouted Class II Rip-Rap		SY	\$	141.00	\$	
N/A	Enhricate & Install Law Flow PARD Dista		EA	\$	500.00	٦	-
N/A	Fabricate & Install Low-Flow BMP Plate		ΕΛ	Ċ	E00.00	ç	
N/A N/A	Fabricate & Install Low-Flow Trash Rack		EA LF	\$	500.00	\$	-
N/A N/A N/A	Fabricate & Install Low-Flow Trash Rack Install HR-2 Handrail		EA LF EA	\$	100.00	\$	-
N/A N/A	Fabricate & Install Low-Flow Trash Rack		LF	_		\$	

Sub-Total = \$ 5,772.60

Mobilization (5%) = \$ 288.63

Cost Estimate is for reference purposes only. Actual contractor costs may vary.



Wet Pond Inspection Report							
Facility Name	Lucasvil	le Regional	Facility ID	STMF0090062	Type of Inspection: Initial Inspection		
Location		8.732048 77.479546	Watershed	Rocky Branch-Broad Run	Previous 48 Hour Precipitation Total	0.35"	
Materials available for inspection		N/A	Owner Notification Date	N/A	Owners/Owner's Representative	City of Manassas	
Inspector	gky_n	nfreeman	Date of Inspection	4/13/2023	Date of Last Inspection	3/26/2021	
Overall Condition Score							
	1	Ade	equate	No deficiencies identified.			
	2	М	onitor	No maintenance may be needed at the time, but might become an issue the future. Will revisit next inspection. Examples include minor erosion, small sediment accumulation, or small structural issues of facility components.			
3	3	Routine Main	tenance Needed	=	out preventative maintenance is required. Examples anagement, minor erosion, or trash/debris removal.		
	4		Repair Needed	Facility is close to or currently not carrying out intended function. Examples include major erosion, significant sediment accumulation, or structural component failure. Repair Immediately			
	N/A Not Applicable Does not pertain to this facility.					facility.	
Remarks							

 $\label{thm:completely blocked Inflow Structure 9.} Sediment accumulation has nearly completely blocked Inflow Structure 9.$

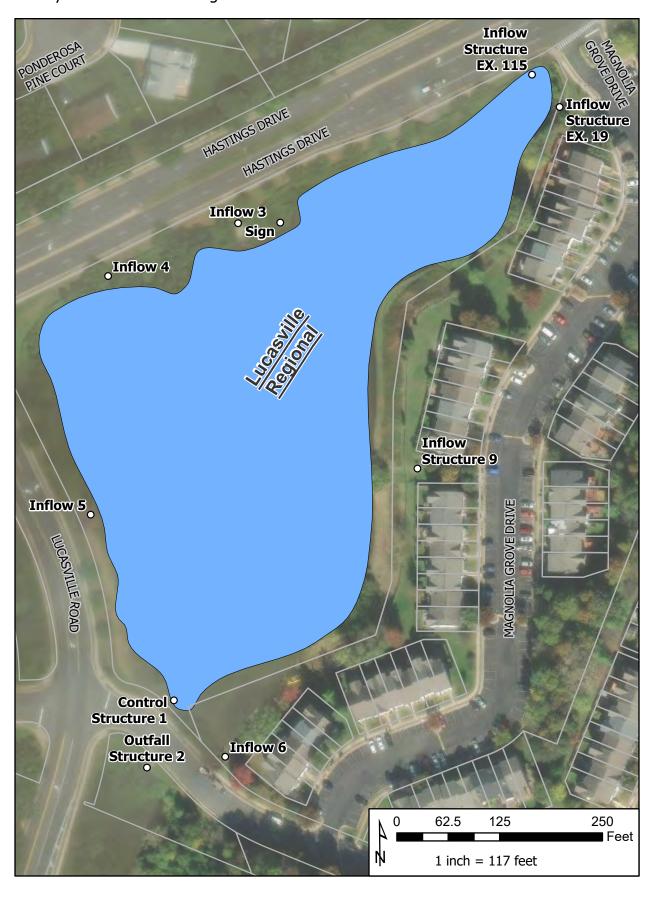
	In	spection Items			
Score	Description	Comment(s) / Corrective Action(s)	Reference Image		
		Overall			
1	Inadequate access to complete thorough				
	inspection				
1	Fences are damaged or have vegetation				
	growing on them				
1	Missing or damaged safety signage				
1	Mosquitos				
	Surrounding drainage area				
1	trash/debris/unauthorized substances that				
	might affect facility				
1	Surrounding drainage area erosion that might				
т.	be related to facility				
	P	re-Treatment			
1	Buildup of trash or debris				
1	Signs of erosion or exposed soil				
4	Sediment in forebay has reached 50% or				
1	more of capacity				
1	Evidence of clogging				
1	Vegetation does not match original design				
		Inlet			
		Inflow Structure EX. 19 (7 Cubic Feet), Inflow			
3	Buildup of trash, debris, and sediment	4 (4 Cubic Feet), Inflow 5 (4 Cubic Feet),	9573, 9596, 9602, 9631,9		
		Inflow Structure 9 (8 Cubic Feet).			
2	Evidence of erosion or undermining around	Erosion observed adjacent to Inflow 4 (0.5	9595		
	inlet	Cubic Feet).	3333		
1	Woody growth around inlet structure				
1	Evidence of nuisance animals				
		Inflow 4, spalling (2 bags of concrete) and			
		joint separation (6.28 Linear Feet), Inflow 6,	9593, 9594, 9600, 962 9632		
3	Damage to inlet pipe or structure	joint separation (6.28 Linear Feet), Inflow			
		Structure 9, joint separation (7.85 Linear			
		Feet).			



Score	Description	Comment(s) / Corrective Action(s)	Reference Image
Score		des emergency spillway if applicable)	Reference image
	·	1, 13-24" tree was observed growing	0.000
3	Woody vegetation on embankment	adjacent to Control Structure 1	9603
1	Shrubbery, low growing vegetation, and/or		
	vine material growing on embankment		
1	Sparse vegetative coverage		
4	Signs of erosion, settlement, piping, or slope		
1	slippage		
1	Signs of seepage, soft spots, and sinkhole		
	formation		
1	Evidence of nuisance animals		
1	Buildup of trash or debris on embankment		
	Trash, debris, or obstructions in emergency		
1	spillway		
		et/Riser Structure	
1	Low-flow orifice is blocked		
_	BMP device is deteriorated, misaligned,		
1	and/or damaged		
1			
1	BMP device is missing		
	Low-level gate drain is accessible and		
1	operational. Drain has been exercised in last		
	three years.		
1	Trash, debris, or other material in BMP device		
	Princ	ipal Spillway Pipe	
		, par operating to pe	
1	Spillway is blocked by debris or sediment		
1	Evidence of leaking joints		
	One or more sections of the pipe have settled		
1	to the point that it threatens the integrity of		
_	the dam		
		ent Area and Side Slopes	
1	Buildup of trash and debris	·	
	·		
1	Silt and sedimentation buildup		
	Ponding area is showing signs of poor health		
1	(i.e. nutrient overload, excess aquatic		
	vegetation, or turbidity)		
1	Signs of erosion along shoreline		
1	Sparse vegetation or erosion		
1	<u> </u>		
1	Evidence of nuisance animals		
	Outfall S	tructure and Channel	
1	Outflow is causing undercutting or erosion		
	Outfall structure has separated more than		
1	three inches from principal spillway barrel		
1	Outfall structure is damaged or rusting		
т.	-		
1	Woody vegetation growing within 5' of outlet		
	and barrel Buildup of trash, debris, and sediment	Trash and debris accumulating adjacent to	
3	around outfall or in channel	the outfall (0.67 CY)	9612, 9617
4		the outian (0.07 Cf)	
1	Signs of erosion around outfall or channel		

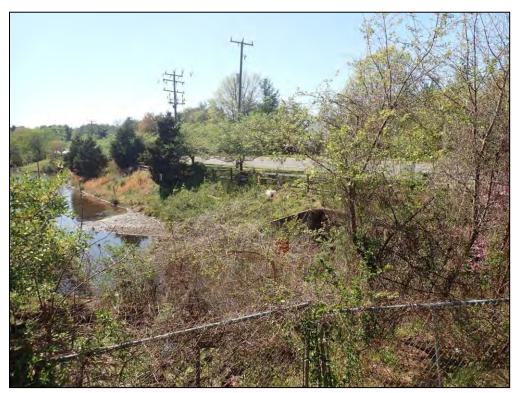
Facility ID: STMF0090062 Inspection Date: 04/13/2023

Facility Name: Lucasville Regional





9564: Facility Overall.



9565: Facility Overall.



9566: Inflow Structure EX. 115, front.



9567: Inside the Western pipe of Inflow Structure EX. 115.



9568: Inside the Middle pipe of Inflow Structure EX. 115.



9569: Inside the Eastern pipe of Inflow Structure EX. 115.



9570: From Inflow Structure EX. 115, looking downstream.



9571: Inflow Structure EX. 19, front.



9572: Inside Inflow Structure EX. 19.



9573: From Inflow Structure EX. 19, looking downstream. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



9580: Facility Overall.



9581: Facility Overall.



9582: Sign, Overall.



9583: Inflow 3, closeup.



9584: Inside Inflow 3.



9586: Inflow 3, Overall.



9587: Inflow 3, Overall.



9588: From Inflow 3, looking downstream.



9589: Facility Overall.



9590: Facility Overall.



9591: Facility Overall.



9592: Inflow 4, front.



9593: Inflow 4, closeup. Damage to inlet pipe or structure (Routine Maintenance Needed).



9594: Inflow 4. Damage to inlet pipe or structure, Joint separation (Routine Maintenance Needed).



9595: Inflow 4, closeup. Evidence of erosion or undermining around inlet (Monitor).



9596: From Inflow 4, looking downstream. Buildup of trash, debris, and sediment (Monitor).



9597: Facility Overall.



9598: Facility Overall.



9599: Inflow 5, front.



9600: Inflow 5, closeup. Damage to inlet pipe or structure (Monitor).



9601: Inside Inflow 5.



9602: From Inflow 5, looking downstream. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



9603: Control Structure 1, front. Woody vegetation on the embankment (Routine Maintenance Needed).



9608: Inside the Eastern PSP of Control Structure 1.



9609: Inside the Middle Eastern PSP of Control Structure 1.



9610: Inside the middle Northern PSP of Control Structure 1.



9611: Inside the Northern PSP of Control Structure 1.



9612: Outfall Structure 2, front. Buildup of trash, debris, and sediment around the outfall or in the channel (Routine Maintenance Needed).



9613: Inside the Northern PSP of Outfall Structure 2.



9614: Inside the Middle Northern PSP of Outfall Structure 2.



9615: Inside the Middle Southern PSP of Outfall Structure 2.



9616: Inside the Southern PSP of Outfall Structure 2.



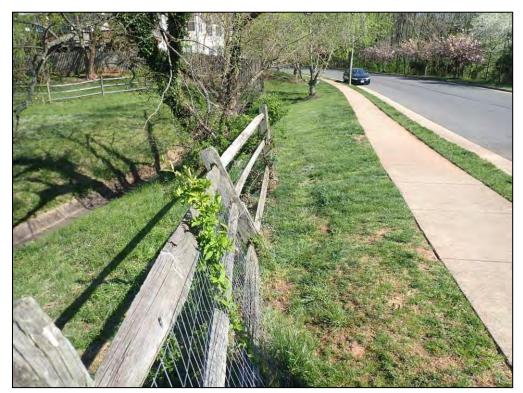
9617: Outfall Structure 2, front. Buildup of trash, debris, and sediment around the outfall or in the channel (Routine Maintenance Needed).



9618: From Outfall Structure 2, looking downstream.



9619: Dam Overall, Front slope.



9620: Dam Overall, Front slope.



9621: Dam Overall, Back slope.



9622: Dam Overall, Back slope.



9623: Inflow 6, front.



9624: Inside Inflow 6. Damage to inlet pipe or structure (Routine Maintenance Needed).



9625: From Inflow 6, looking downstream.



9626: Facility Overall.



9627: Facility Overall.



9628: Facility Overall.



9629: Facility Overall.



9630: Facility Overall.



9631: Inflow Structure 9, front. Buildup of trash, debris, and sediment (Immediate Repair Needed).



9632: Inside Inflow Structure 9. Damage to inlet pipe or structure (Routine Maintenance Needed).



9633: From Inflow Structure 9, looking downstream. Buildup of trash, debris, and sediment (Immediate Repair Needed).



NON-ROUTINE MAINTENANCE COST ESTIMATE STMF0090062 / Lucasville Regional

FY2023 Public BMP Inspections

Date of Inspection: 04/13/2023
Date of Estimate: 09/01/2023
Estimate Prepared by: GKY

	Estimate Prepared by: GKY						
ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UI	NIT PRICE		COST
1	Mowing / Clearing (includes removal & proper disposal of all woody stock, brush, & trees up to 2-inch diameter)		0.1 acre	\$	74.00	\$	-
2	Pond Control Structure/Riser Clearing (includes removal & disposal of trash, debris, floatables, & other material from directly around and on top of the control structure/riser)	0.67	CY	\$	30.00	\$	20.10
3	Pond Low-Flow Channel Clearing (25' Radius) (includes removal & disposal of trash, debris, floatables, & other material from pond channels & trash rack within 25' radius of control structure/riser)		EA	\$	181.00	\$	-
4	Shoreline Clean-Up (includes removal & disposal of trash & debris from 15' of wet side and 15' of dry side of WSE)		0.1 acre	\$	750.00	\$	-
5	Trash/Debris Removal & Disposal		CY	\$	164.00	\$	-
6	Repair/Replace Facility Sign		EA	\$	247.00	\$	-
7	Repair/Replace Facility Sign and Post Installation		EA	\$	329.00	\$	-
16	Hydroseeder (400 - 600 Gallon) with Upland Seed Mix		HR	\$	217.00	\$	-
17	Hydroseeder (400 - 600 Gallon) with Wetland Seed Mix		HR	\$	411.00	\$	-
	Hydroseeder (400 - 600 Gallon) w/ Co. Supplied Seed Mix				90.00		
18			HR	\$	90.00	\$	-
29	Pond Low-Flow Channel Clearing (per 25') (includes removal & disposal of sediment, trash, debris, floatables, & other material using handheld equipment from the pond low-flow channel)		25 FT	\$	156.00	\$	-
30	Tree Removal (2" to 6" DBH)		EA	\$	1,316.00	\$	-
31	Tree Removal (7" to 12" DBH)		EA	\$	2,961.00	\$	-
32	Tree Removal (13" to 24" DBH)	1.00	EA	\$	4,930.00	\$	4,930.00
33	Tree Removal (25" to 36" DBH)		EA	\$	6,250.00	\$	-
34	Stump Removal & Grinding (up to 12")		EA	\$	576.00	\$	-
39	Excavation of Sediment (includes removal & disposal of sediment from the bottom of the existing pond using mechanical means; assumed potentially hazardous waste)		CY	\$	150.00	\$	-
40	Animal Burrow Repair		EA	\$	1,316.00	\$	-
53	VDOT Class I Rip-Rap with Fabric Liner		TON	\$	156.00	\$	-
54	VDOT Class II Rip-Rap with Fabric Liner		TON	\$	176.00	\$	
58	Concrete Removal and Disposal		SF	\$	39.00	\$	
59	Grouting Cracks and Joints	20.50	LF	\$	189.00	\$	3,874.50
62	Parging (per 50lb bag)	2.00	EA	\$	452.00	\$	904.00
70	Seed Mix (includes straw mulch and water)	2.00	0.1 acre	\$	286.00	\$	-
79	Topsoil (3")		CY	\$	74.00	\$	-
N/A	Remove & Dispose of Sediment / Debris from Inside Drainage Structures and Pipes	23.00	CF	\$	30.00	\$	690.00
N/A	Install Grouted Class I Rip-Rap		SY	\$	90.00	\$	-
N/A N/A	Install Grouted Class II Rip-Rap Fabricate & Install Low-Flow BMP Plate		SY EA	\$	141.00 500.00	\$	-
N/A	Fabricate & Install Low-Flow Birl Friate Fabricate & Install Low-Flow Trash Rack		EA	\$	500.00	\$	<u> </u>
N/A	Install HR-2 Handrail		LF	\$	100.00	\$	-
N/A	Install Access Road Gate		EA	\$	2,100.00	\$	-
N/A	Install Post and Cable Barrier		EA	\$	750.00	\$	-
N/A	Install Removable Locking Bollard		EA	\$	950.00 n-Total =	\$	10 418 60

Sub-Total = \$ 10,418.60

Mobilization (5%) = \$ 520.93

Cost Estimate is for reference purposes only. Actual contractor costs may vary.



1) MANAGEMENT A THE WORLD COMMUNICATION AND THE								
Wet Pond Inspection Report								
Facility Name		s Brooke, nstream	Facility ID	STMF0090063	Type of Inspection: Initial Inspection			
Location		8.733365 77.462259	Watershed	Lake Jackson-Occoquan River	Previous 48 Hour Precipitation Total	0.00"		
Materials available for inspection		N/A	Owner Notification Date	N/A	Owners/Owner's Representative	City of Manassas		
Inspector	gky_n	nfreeman	Date of Inspection	4/13/2023	Date of Last Inspection	1/10/2022		
Overall Condition Score								
	1	Adequate No deficiencies idea			No deficiencies ident	tified.		
	2	Monitor No maintenance may be needed at the time, but might become a the future. Will revisit next inspection. Examples include minor small sediment accumulation, or small structural issues of fa components.			nples include minor erosion,			
	3	Routine Main	Routine Maintenance Needed Facility is functional but preventative maintenance is required. Example includes vegetation management, minor erosion, or trash/debris removes			-		
4	4	Facility is close to or currently not carrying out intended function include major erosion, significant sediment accumulation, or component failure. Repair Immediately			accumulation , or structural			
	N/A Not Applicable Does not pertain to this facility.							
Remarks								

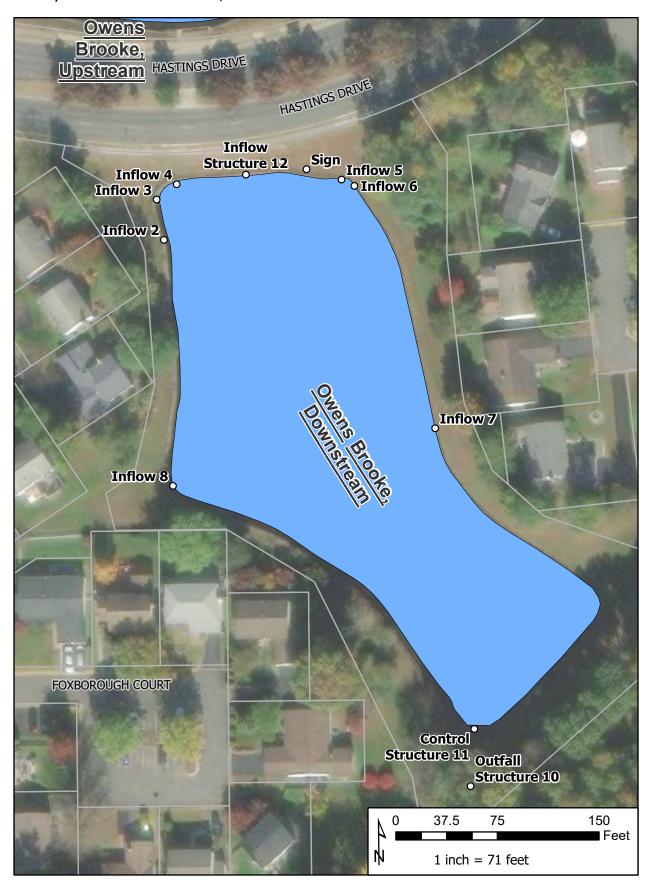
The dewatering valve orifice was not entirely closed, and no control apparatus for it was found.

	Inspection Items							
Score	Description	Comment(s) / Corrective Action(s)	Reference Image					
Overall								
1	Inadequate access to complete thorough							
	inspection Fences are damaged or have vegetation							
1	growing on them							
1	Missing or damaged safety signage							
1	Mosquitos							
1	Surrounding drainage area trash/debris/unauthorized substances that might affect facility							
1	Surrounding drainage area erosion that might be related to facility							
	Pr	re-Treatment						
1	Buildup of trash or debris							
1	Signs of erosion or exposed soil							
1	Sediment in forebay has reached 50% or more of capacity							
1	Evidence of clogging							
1	Vegetation does not match original design							
		Inlet						
1	Buildup of trash, debris, and sediment							
1	Evidence of erosion or undermining around inlet							
1	Woody growth around inlet structure							
1	Evidence of nuisance animals							
3	Damage to inlet pipe or structure	Spalling observed at Inflow 3 (1 bag of concrete).	9520, 9522					



	нято	RIC HEART, MODERN BEAT,	
Score	Description	Comment(s) / Corrective Action(s)	Reference Image
		des emergency spillway if applicable)	
1	Woody vegetation on embankment		
1	Shrubbery, low growing vegetation, and/or		
	vine material growing on embankment		
1	Sparse vegetative coverage		
1	Signs of erosion, settlement, piping, or slope		
	slippage Signs of seepage, soft spots, and sinkhole		
1	formation		
1	Evidence of nuisance animals		
1	Buildup of trash or debris on embankment		
1	•		
1	Trash, debris, or obstructions in emergency spillway		
		t/Riser Structure	
1	Low-flow orifice is blocked	, ,	
-	BMP device is deteriorated, misaligned,	Dewatering valve control missing and not	
4	and/or damaged	fully closed.	9543, 9544, 9546, 9547
1	BMP device is missing	runy ciosea.	
	Low-level gate drain is accessible and		
1	operational. Drain has been exercised in last		
1	three years.		
1	Trash, debris, or other material in BMP device		
1			
	Princi	pal Spillway Pipe	
1	Spillway is blocked by debris or sediment		
1	Evidence of leaking joints		
1	- -		
1	One or more sections of the pipe have settled to the point that it threatens the integrity of		
_	the dam		
		nt Area and Side Slopes	
1	Buildup of trash and debris	•	
	· ·		
1	Silt and sedimentation buildup		
	Ponding area is showing signs of poor health		
1	(i.e. nutrient overload, excess aquatic vegetation, or turbidity)		
4	Signs of erosion along shoreline		
1	Signs of erosion along shoreline		
1	Sparse vegetation or erosion		
1	Evidence of nuisance animals		
	Outfall St	ructure and Channel	
1	Outflow is causing undercutting or erosion		
-	Outfall structure has separated more than		
1	three inches from principal spillway barrel		
1	Outfall structure is damaged or rusting		
_	Woody vegetation growing within 5' of outlet		
1	and barrel		
1	Buildup of trash, debris, and sediment		
_	around outfall or in channel		
1	Signs of erosion around outfall or channel		

Facility ID: STMF0090063 Inspection Date: 04/13/2023





9510: Inflow Structure 12, front.



9511: Close-up of the Western pipe of Inflow Structure 12.

Facility ID: STMF0090063
Facility Name: Owens Brooke, Downstream



9512: Close-up of the Middle Western pipe of Inflow Structure 12.



9513: Close-up of the Middle Eastern pipe of Inflow Structure 12.



9514: Close-up of the Eastern pipe of Inflow Structure 12.



9515: From Inflow Structure 12, looking downstream.



9517: Inflow 2, front.



9518: Inside Inflow 2.



9519: From Inflow 2, looking downstream.



9520: Inflow 3, front. Damage to inlet pipe or structure, Spalling(Routine Maintenance Needed).



9521: Inside Inflow 3.



9522: Inflow 3, closeup. Damage to inlet pipe or structure, Spalling (Routine Maintenance Needed).



9523: From Inflow 3, looking downstream.



9524: Inflow 4, front.



9525: Inside Inflow 4.



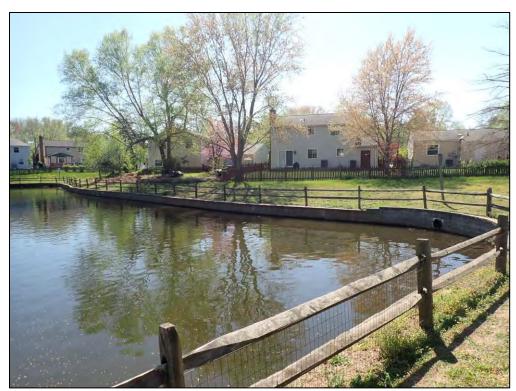
9526: From Inflow 4, looking downstream.



9527: Facility Overall.



9528: Facility Overall.



9529: Facility Overall.



9530: Sign, closeup.



9531: Inflow 5, front.



9532: Inside Inflow 5.



9533: From Inflow 5, looking downstream.



9534: Inflow 6, front.



9535: Inside Inflow 6.



9536: From Inflow 6, looking downstream.



9537: Inflow 7, front.



9538: Inside Inflow 7.



9539: From Inflow 7, looking downstream.



9540: Facility Overall.



9541: Facility Overall.



9542: Facility Overall.



9543: Control Structure 11, front. BMP device is deteriorated, misaligned, and/or damaged (Immediate Repair Needed).



9544: Control Structure 11, front. BMP device is deteriorated, misaligned, and/or damaged (Immediate Repair Needed).



9545: Inside Control Structure 11.



9546: Inside Control Structure 11. BMP device is deteriorated, misaligned, and/or damaged (Immediate Repair Needed).



9547: Inside Control Structure 11, looking upstream toward the dewatering valve orifice. BMP device is deteriorated, misaligned, and/or damaged (Immediate Repair Needed).



9548: Inside Control Structure 11, looking downstream along the Eastern PSP.



9549: Inside Control Structure 11, looking downstream along the middle PSP.



9550: Inside Control Structure 11, looking downstream along the Western PSP.



9551: Outfall Structure 10, From dam.



9552: Outfall, front.



9553: Inside Outfall Structure 10, looking along the Eastern PSP.



9554: Inside Outfall Structure 10, looking along the Middle PSP.



9555: Inside Outfall Structure 10, looking along the Western PSP.



9556: From Outfall Structure 10, looking downstream.



9557: Dam Overall.



9558: Dam Overall.



9559: Facility Overall.



9560: Facility, Overall, North.



9561: Inflow 8, front.



9562: Inside Inflow 8.



NON-ROUTINE MAINTENANCE COST ESTIMATE STMF0090063 / Owens Brooke, Downstream FY2023 Public BMP Inspections

Date of Inspection: 04/13/2023
Date of Estimate: 09/01/2023
Estimate Prepared by: GKY

	Estimate Prepared			•			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT	U	NIT PRICE		COST
1	Mowing / Clearing (includes removal & proper disposal of all woody stock, brush, & trees up to 2-inch diameter)		0.1 acre	\$	74.00	\$	-
2	Pond Control Structure/Riser Clearing (includes removal & disposal of trash, debris, floatables, & other material from directly around and on top of the control structure/riser)		CY	\$	30.00	\$	-
3	Pond Low-Flow Channel Clearing (25' Radius) (includes removal & disposal of trash, debris, floatables, & other material from pond channels & trash rack within 25' radius of control structure/riser)		EA	\$	181.00	\$	-
4	Shoreline Clean-Up (includes removal & disposal of trash & debris from 15' of wet side and 15' of dry side of WSE)		0.1 acre	\$	750.00	\$	-
5	Trash/Debris Removal & Disposal		CY	\$	164.00	\$	-
6	Repair/Replace Facility Sign		EA	\$	247.00	\$	-
7	Repair/Replace Facility Sign and Post Installation		EA	\$	329.00	\$	
16	Hydroseeder (400 - 600 Gallon) with Upland Seed Mix		HR	\$	217.00	\$	
	Hydroseeder (400 - 600 Gallon) with Wetland Seed Mix			\$	411.00	\$	
17			HR	Ş			-
18	Hydroseeder (400 - 600 Gallon) w/ Co. Supplied Seed Mix		HR	\$	90.00	\$	-
29	Pond Low-Flow Channel Clearing (per 25') (includes removal & disposal of sediment, trash, debris, floatables, & other material using handheld equipment from the pond low-flow channel)		25 FT	\$	156.00	\$	-
30	Tree Removal (2" to 6" DBH)		EA	\$	1,316.00	\$	-
31	Tree Removal (7" to 12" DBH)		EA	\$	2,961.00	\$	-
32	Tree Removal (13" to 24" DBH)		EA	\$	4,930.00	\$	-
33	Tree Removal (25" to 36" DBH)		EA	\$	6,250.00	\$	-
34	Stump Removal & Grinding (up to 12")		EA	\$	576.00	\$	
39	Excavation of Sediment (includes removal & disposal of sediment from the bottom of the existing pond using mechanical means; assumed potentially hazardous waste)		CY	\$	150.00	\$	-
40	Animal Burrow Repair		EA	\$	1,316.00	\$	-
53	VDOT Class I Rip-Rap with Fabric Liner		TON	\$	156.00	\$	-
54	VDOT Class II Rip-Rap with Fabric Liner		TON	\$	176.00	\$	-
58	Concrete Removal and Disposal		SF	\$	39.00	\$	
59	Grouting Cracks and Joints		LF	\$	189.00	\$	
	_	4.00					
62 70	Parging (per 50lb bag) Seed Mix (includes straw mulch and water)	1.00	0.1 acre	\$	452.00 286.00	\$	452.00
79	Topsoil (3")		CY	\$	74.00	\$	-
N/A	Remove & Dispose of Sediment / Debris from Inside Drainage Structures and Pipes		CF	\$	30.00	\$	-
N/A	Install Grouted Class I Rip-Rap		SY	\$	90.00	\$	-
N/A	Install Grouted Class II Rip-Rap		SY	\$	141.00	\$	-
N/A	Fabricate & Install Low-Flow BMP Plate Fabricate & Install Low-Flow Trash Rack	1.00	EΑ	\$	500.00	\$	500.00
N/A N/A	Install HR-2 Handrail		EA LF	\$	500.00	\$ \$	-
N/A N/A	Install Access Road Gate		EA	\$	2,100.00	\$	
N/A	Install Post and Cable Barrier		EA	\$	750.00	\$	-
N/A	Install Removable Locking Bollard		EA	\$	950.00	\$	-

Sub-Total = \$ 952.00

Mobilization (5%) = \$ 47.60

Cost Estimate is for reference purposes only. Actual contractor costs may vary.



Wet Pond Inspection Report								
Facility Name	Owens Bro	oke, Upstream	Facility ID	STMF0090064	Type of Inspection: Initial Inspection			
Location		8.734417 77.462706	Watershed	Lake Jackson-Occoquan River	Previous 48 Hour Precipitation Total	0.00"		
Materials available for inspection	N/A		Owner Notification Date	N/A	Owners/Owner's Representative	City of Manassas		
Inspector	gky_m	nfreeman	Date of Inspection	4/13/2023	Date of Last Inspection	1/10/2022		
Overall Condition Score								
	1	Adequate		No deficiencies identified.				
	2	Мо	onitor	No maintenance may be needed at the time, but might become an issu the future. Will revisit next inspection. Examples include minor erosio small sediment accumulation, or small structural issues of facility components.				
	3	Routine Main	tenance Needed	rance Needed Facility is functional but preventative maintenance is required. Examples includes vegetation management, minor erosion, or trash/debris remova				
4	4	Immediate Repair Needed include major erosion, significan			significant sediment	itly not carrying out intended function. Examples gnificant sediment accumulation , or structural ent failure. Repair Immediately		
	N/A Not Applicable Does not pertain to this facility.					facility.		
Remarks								

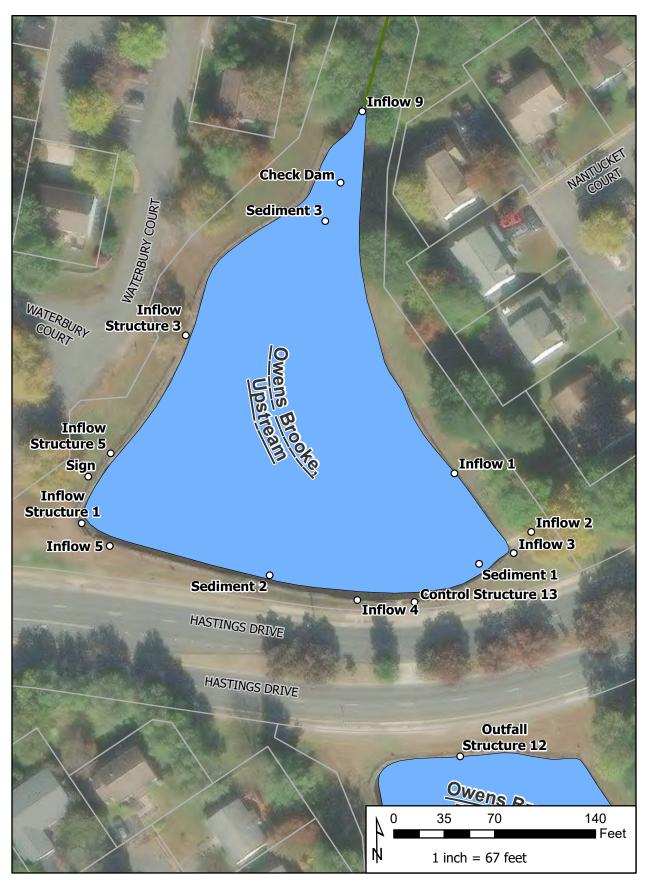
The standing water in the PSPs is at the same level as the pond directly downstream of the facility. The facility is missing its dewatering valve control valve.

Inspection Items							
Score	Description	Comment(s) / Corrective Action(s)	Reference Image				
Overall							
1	Inadequate access to complete thorough						
-	inspection						
1	Fences are damaged or have vegetation						
	growing on them						
1	Missing or damaged safety signage						
1	Mosquitos						
1	Surrounding drainage area trash/debris/unauthorized substances that might affect facility						
1	Surrounding drainage area erosion that might be related to facility						
		re-Treatment					
3	Buildup of trash or debris	Sediment accumulating in and adjacent to the check dam (0.20 CY).	9505				
1	Signs of erosion or exposed soil						
1	Sediment in forebay has reached 50% or more of capacity						
1	Evidence of clogging						
1	Vegetation does not match original design						
		Inlet					
2	Buildup of trash, debris, and sediment	Trash, debris, and sediment beginning to accumulate in Inflow 9 (2 Cubic Feet)	9500				
1	Evidence of erosion or undermining around inlet						
1	Woody growth around inlet structure						
1	Evidence of nuisance animals						
4	Damage to inlet pipe or structure	Inflow 1 pipe damaged, Inflow 3 joint separation (3.93 Linear Feet), Inflow 4 spalling (1 bag of concrete), Inflow 4 joint separation (3.93 Linear Feet), Inflow Structure 3 joint separation (3.93 Linear Feet).	9475, 9481, 9485, 9486, 9488, 9489, 9498				



Score	Description	Comment(s) / Corrective Action(s)	Reference Image
	•	des emergency spillway if applicable)	, in the second
1	Woody vegetation on embankment		
1	Shrubbery, low growing vegetation, and/or		
	vine material growing on embankment		
1	Sparse vegetative coverage		
1	Signs of erosion, settlement, piping, or slope slippage		
1	Signs of seepage, soft spots, and sinkhole formation		
1	Evidence of nuisance animals		
1	Buildup of trash or debris on embankment		
1	Trash, debris, or obstructions in emergency spillway		
		l et/Riser Structure	
1	Low-flow orifice is blocked		
4	BMP device is deteriorated, misaligned,	Dewatering valve missing	9465, 9466
1	and/or damaged BMP device is missing		
т_	Low-level gate drain is accessible and		
1	operational. Drain has been exercised in last		
4	three years. Trash, debris, or other material in BMP device	Debris blocking dewatering valve orifice (0.20 CY).	9465, 9466
		ipal Spillway Pipe	
1	Spillway is blocked by debris or sediment		
1	Evidence of leaking joints		
1	One or more sections of the pipe have settled to the point that it threatens the integrity of		
	the dam	ent Area and Side Slopes	
		·	
3	Buildup of trash and debris	Trash and debris accumulating along the Southern bank of the facility (0.60 CY).	9483, 9484
3	Silt and sedimentation buildup	Silt and sediment accumulating adjacent to the check dam and facility shoreline (51.8 CY).	9483, 9484, 9502, 9507, 9508
1	Ponding area is showing signs of poor health (i.e. nutrient overload, excess aquatic vegetation, or turbidity)		
1	Signs of erosion along shoreline		
1	Sparse vegetation or erosion		
1	Evidence of nuisance animals		
		tructure and Channel	
1	Outflow is causing undercutting or erosion		
1	Outfall structure has separated more than three inches from principal spillway barrel		
1	Outfall structure is damaged or rusting		
1	Woody vegetation growing within 5' of outlet		
1	and barrel Buildup of trash, debris, and sediment		
	around outfall or in channel		
1	Signs of erosion around outfall or channel		

Facility ID: STMF0090064 Inspection Date: 04/13/2023





9455: Facility Overall.



9456: Facility Overall.



9457: Facility Overall.



9458: Facility Overall.



9459: Facility Overall.



9460: Facility Overall.



9461: Control Structure 13, front.



9462: Control Structure 13, front.



9463: Control Structure 13, weir notch close-up.



9464: Control Structure 13, weir notch close-up.



9465: Inside Control Structure 13. Trash, debris, or other material in BMP device (Immediate Repair Needed). BMP device is deteriorated, misaligned, and/or damaged (Immediate Repair Needed).



9466: Inside Control Structure 13. Trash, debris, or other material in BMP device (Immediate Repair Needed). BMP device is deteriorated, misaligned, and/or damaged (Immediate Repair Needed).



9467: Inside Control Structure 13, looking downstream along the Western PSP.



9468: Inside Control Structure 13, looking downstream along the Middle Western PSP.



9469: Inside Control Structure 13, looking toward the low-flow orifice.



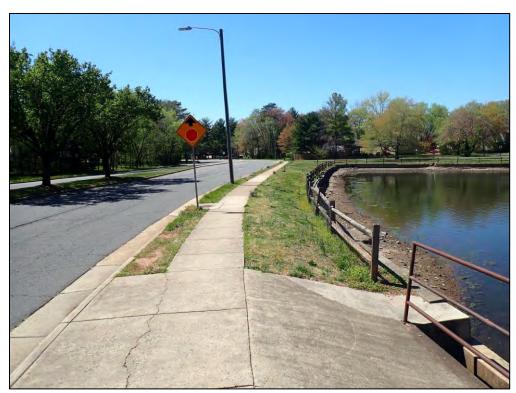
9470: Inside Control Structure 13, looking downstream along the Middle Eastern PSP.



9471: Inside Control Structure 13, looking downstream along the Eastern PSP.



9472: Outfall Structure 12, from dam.



9473: Dam Overall.



9474: Dam overall.



9475: Inflow 1, front. Damage to inlet pipe or structure (Routine Maintenance Needed).



9476: Inside Inflow 1.



9477: From Inflow 1, looking downstream.



9478: Looking upstream toward Inflow 2.



9479: From Inflow 2, looking downstream.



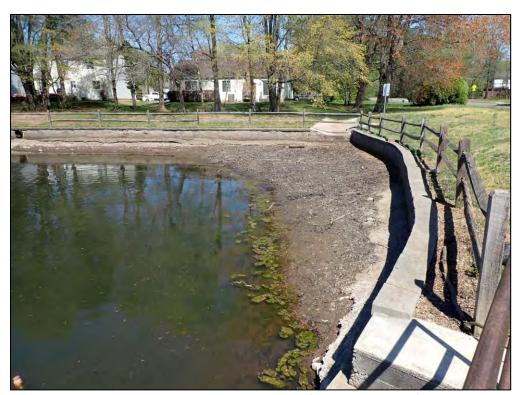
9480: Inflow 3, front.



9481: Inside Inflow 3. Damage to inlet pipe or structure (Monitor).



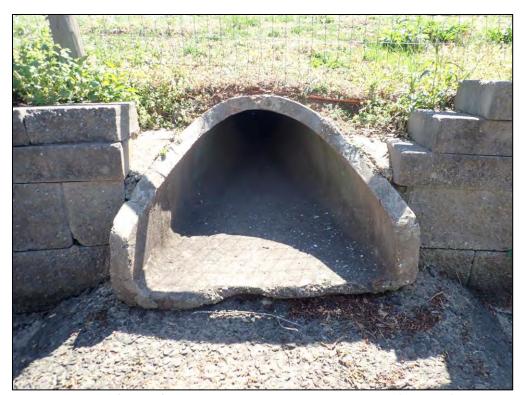
9482: From Inflow 3, looking downstream.



9483: Impoundment area, Sediment 1 overall. Buildup of trash and debris (Routine Maintenance Needed). Silt and sedimentation buildup (Routine Maintenance Needed).



9484: Impoundment area, Sediment 2 overall. Buildup of trash and debris (Routine Maintenance Needed). Silt and sedimentation buildup (Routine Maintenance Needed).



9485: Inflow 4, front. Damage to inlet pipe or structure (Monitor).



9486: Inside Inflow 4. Damage to inlet pipe or structure (Immediate Repair Needed).



9487: From Inflow 4, looking downstream.



9488: Inflow 5, front.



9489: Inside Inflow 5.



9490: From Inflow 5, looking downstream.



9491: Inflow Structure 1, front.



9492: Inside Inflow Structure 1.



9493: From Inflow Structure 1, looking downstream.



9494: Inflow Structure 5, front.



9495: Inside Inflow Structure 5.



9496: From Inflow Structure 5, looking downstream.



9497: Inflow Structure 3, front.



9498: Inside Inflow Structure 3. Damage to inlet pipe or structure (Monitor).



9499: From Inflow Structure 3, looking downstream.



9500: Looking upstream along Inflow 9. Buildup of trash, debris, and sediment (Monitor).



9501: From Inflow 9, looking downstream.



9502: Facility overall. Silt and sedimentation buildup (Routine Maintenance Needed).



9503: Check Dam, overall.



9504: From The Check Dam, looking upstream toward Inflow 9.



9505: Check Dam, closeup. Buildup of trash or debris (Routine Maintenance Needed).



9506: From the Check Dam, looking downstream.



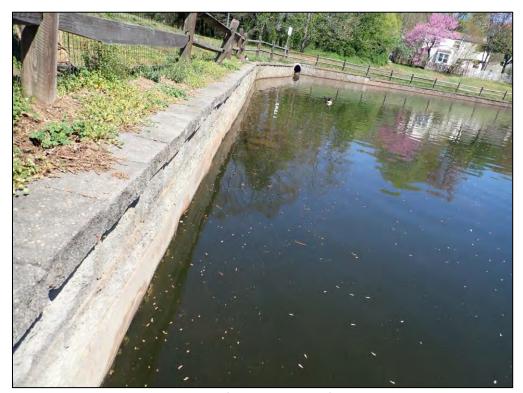
9507: Facility overall. Silt and sedimentation buildup (Routine Maintenance Needed).



9508: Impoundment area, Sediment 3 overall. Silt and sedimentation buildup (Routine Maintenance Needed).



9509: Sign, closeup.



9510: Outfall Structure 12, front.



9511: Outfall Structure 12, looking toward the Western PSP.



9512: Outfall Structure 12, looking toward the middle Western PSP.



9513: Outfall Structure 12, looking toward the middle Eastern PSP.



9514: Outfall Structure 12, looking toward the Eastern PSP.



9515: From Outfall Structure 12, looking downstream.



NON-ROUTINE MAINTENANCE COST ESTIMATE STMF0090064 / Owens Brooke, Upstream FY2023 Public BMP Inspections

Date of Inspection: 04/13/2023
Date of Estimate: 09/01/2023
Estimate Prepared by: GKY

	Estimate Prepared	-		T		
ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UI	NIT PRICE	COST
1	Mowing / Clearing (includes removal & proper disposal of all woody stock, brush, & trees up to 2-inch diameter)		0.1 acre	\$	74.00	\$ -
2	Pond Control Structure/Riser Clearing (includes removal & disposal of trash, debris, floatables, & other material from directly around and on top of the control structure/riser)	0.20	CY	\$	30.00	\$ 6.00
3	Pond Low-Flow Channel Clearing (25' Radius) (includes removal & disposal of trash, debris, floatables, & other material from pond channels & trash rack within 25' radius of control structure/riser)		EA	\$	181.00	\$ -
4	Shoreline Clean-Up (includes removal & disposal of trash & debris from 15' of wet side and 15' of dry side of WSE)		0.1 acre	\$	750.00	\$ -
5	Trash/Debris Removal & Disposal	0.60	CY	\$	164.00	\$ 98.40
6	Repair/Replace Facility Sign		EA	\$	247.00	\$ -
7	Repair/Replace Facility Sign and Post Installation		EA	\$	329.00	\$ -
16	Hydroseeder (400 - 600 Gallon) with Upland Seed Mix		HR	\$	217.00	\$
17	Hydroseeder (400 - 600 Gallon) with Wetland Seed Mix		HR	\$	411.00	\$ _
18	Hydroseeder (400 - 600 Gallon) w/ Co. Supplied Seed Mix		HR	\$	90.00	\$ -
29	Pond Low-Flow Channel Clearing (per 25') (includes removal & disposal of sediment, trash, debris, floatables, & other material using handheld equipment from the pond low-flow channel)		25 FT	\$	156.00	\$ -
30	Tree Removal (2" to 6" DBH)		EA	\$	1,316.00	\$ -
31	Tree Removal (7" to 12" DBH)		EA	\$	2,961.00	\$ -
32	Tree Removal (13" to 24" DBH)		EA	\$	4,930.00	\$ -
33	Tree Removal (25" to 36" DBH)		EA	\$	6,250.00	\$ -
34	Stump Removal & Grinding (up to 12")		EA	\$	576.00	\$ -
39	Excavation of Sediment (includes removal & disposal of sediment from the bottom of the existing pond using mechanical means; assumed potentially hazardous waste)	52.00	CY	\$	150.00	\$ 7,800.00
40	Animal Burrow Repair		EA	\$	1,316.00	\$ -
53	VDOT Class I Rip-Rap with Fabric Liner		TON	\$	156.00	\$ -
54	VDOT Class II Rip-Rap with Fabric Liner		TON	\$	176.00	\$
58	Concrete Removal and Disposal		SF	\$	39.00	\$ _
	Grouting Cracks and Joints	12.00		\$		\$
59	_	12.00	LF		189.00	 2,268.00
62 70	Parging (per 50lb bag) Seed Mix (includes straw mulch and water)	1.00	0.1 acre	\$	452.00 286.00	\$ 452.00
79	Topsoil (3")		CY	\$	74.00	\$ -
N/A	Remove & Dispose of Sediment / Debris from Inside Drainage Structures and Pipes	2.00	CF	\$	30.00	\$ 60.00
N/A	Install Grouted Class I Rip-Rap		SY	\$	90.00	\$ -
N/A	Install Grouted Class II Rip-Rap		SY	\$	141.00	\$ -
N/A	Fabricate & Install Low-Flow BMP Plate Fabricate & Install Low-Flow Trash Rack	1.00	EA	\$	500.00	\$ 500.00
N/A N/A	Install HR-2 Handrail		EA LF	\$	500.00 100.00	\$ -
N/A N/A	Install Access Road Gate		EA	\$	2,100.00	\$
N/A	Install Post and Cable Barrier		EA	\$	750.00	\$ -
N/A	Install Removable Locking Bollard		EA	\$	950.00	\$ -

Sub-Total = \$ 11,184.40

Mobilization (5%) = \$ 559.22



Extended Detention Pond Inspection Report									
Facility Name	Winterse	ect Hastings	Facility ID	STMF0090072	Type of Inspection: Initial Inspection				
Location		8.732585 77.468082	Watershed	Lake Jackson-Occoquan River	Previous 48 Hour Precipitation Total	0.00"			
Materials available for inspection	N/A		Owner Notification Date	N/A	Owners/ Owner's Representative	City pf Manassas			
Inspectors	gky_m	nfreeman	Date of Inspection	4/13/2023	Date of Last Inspection	12/22/2021			
	Overall Condition Score								
	1	Ade	equate		No deficiencies identified.				
	2	M	onitor	No maintenance may be needed at the time, but might become an iss in the future. Will revisit next inspection. Examples include minor erosi small sediment accumulation, or small structural issues of facility components.					
3	3	Routine Main	tenance Needed	Facility is functional but preventative maintenance is required. Examples includes vegetation management, minor erosion, or trash/debris removal.					
	4	Immediate	Repair Needed	Facility is close to or currently not carrying out intended function. Examples include major erosion, significant sediment accumulation, or structural component failure. Repair Immediately					
	N/A	Not A	pplicable		es not pertain to this	facility.			
	Remarks								

Inspection Items							
Score	Description	Comment(s) / Corrective Action(s)	Reference Image				
Overall							
1	Inadequate access to complete thorough						
Τ.	inspection						
1	Fences are damaged or have vegetation						
	growing on them						
1	Missing or damaged safety signage						
1	Mosquitos						
	Surrounding drainage area						
1	trash/debris/unauthorized substances that						
	might affect facility						
1	Surrounding drainage area erosion that						
	might be related to facility						
		re-Treatment					
1	Buildup of trash or debris						
1	Signs of erosion or exposed soil						
4	Sediment in forebay has reached 50% or						
1	more of capacity						
1	Evidence of clogging						
1	Vegetation does not match original design						
		Inlet					
1	Buildup of trash, debris, and sediment						
1	Evidence of erosion or undermining around						
1	inlet						
1	Woody growth around inlet structure						
1	Evidence of nuisance animals						
4	Damage to inlet pipe or structure	Inflow Structure 15, joint separation (5.50 Linear Feet), damage to pipe, wires were run through the flared end section of the structure should be rerouted (1 bag of concrete), spalling (same bag of concrete).	9404, 9404, 9405				





Score	Description	Comment(s) / Corrective Action(s)	Reference Image
	Dam Embankment (Inclu	des emergency spillway if applicable)	
1	Woody vegetation on embankment		
1	Shrubbery, low growing vegetation, and/or vine material growing on embankment		
1	Sparse vegetative coverage		
1	Signs of erosion, settlement, piping, or slope slippage		
1	Signs of seepage, soft spots, and sinkhole formation		
1	Evidence of nuisance animals		
1	Buildup of trash or debris on embankment		
1	Trash, debris, or obstructions in emergency spillway		
	Outle	et/Riser Structure	
1	Low-flow orifice is blocked		
1	BMP device is deteriorated, misaligned, and/or damaged		
1	BMP device is missing		
1	Low-level gate drain is accessible and operational. Drain has been exercised in last three years.		
3	Trash, debris, or other material in BMP device	Remove the sapling from inside Control Structure 16.	9391
	Princ	ipal Spillway Pipe	
1	Spillway is blocked by debris or sediment		
1	Evidence of leaking joints		
1	One or more sections of the pipe have settled to the point that it threatens the integrity of the dam		
		ent Area and Side Slopes	
1	Buildup of trash and debris		
1	Silt and sedimentation buildup		
1	Ponding area is showing signs of poor health (i.e. nutrient overload, excess aquatic vegetation, or turbidity)		
1	Signs of erosion along shoreline		
1	Low-flow ditch is clogged with sediment/debris		
1	Sections of low-flow dich are cracked or showing signs of undercutting		
1	Sparse vegetation or erosion		
1	Evidence of nuisance animals		
	Outfall S	tructure and Channel	
1	Outflow is causing undercutting or erosion		
1	Outfall structure has separated more than three inches from principal spillway barrel		
1	Outfall structure is damaged or rusting		
1	Woody vegetation growing within 5' of outlet and barrel		
1	Buildup of trash, debris, and sediment around outfall or in channel		
3	Signs of erosion around outfall or channel	Erosion adjacent to Outfall Structure 54 (0.2 CY).	9411, 9412
		- ,	

Facility ID: STMF0090072 Inspection Date: 04/13/2023

Facility Name: Wintersect Hastings





9384: Facility Overall.



9385: Facility Overall.



9386: Control Structure 16, front.



9387: Control Structure 16, low-flow orifice close-up.



9388: Control Structure 16, top trash rack.



9389: Control Structure 16, top trash rack.



9390: Inside Control Structure 16.



9391: Inside Control Structure 16. Trash, debris, or other material in BMP device (Routine Maintenance Needed).



9392: Inside Control Structure 16, looking upstream toward the low-flow orifice.



9393: Inside Control Structure 16, looking downstream.



9394: Outfall Structure 54, from dam.



9395: Dam Overall.



9396: Dam overall.



9397: From Inflow 1, looking upstream.



9398: From Inflow 1, looking downstream.



9399: Facility Overall.



9400: Facility Overall.



9401: Facility Overall.



9402: Sign, closeup.



9403: Inflow Structure 15, front.



9404: Inflow Structure 15. Damage to inlet pipe or structure (Immediate Repair Needed).



9405: Inflow Structure 15, closeup. Damage to inlet pipe or structure (Routine Maintenance Needed).



9406: From Inflow Structure 15, looking downstream.



9407: Outfall Structure 54, top.



9408: Inside Outfall Structure 54.



9409: Inside Outfall Structure 54, looking upstream.



9410: Inside Outfall Structure 54, looking downstream.



9411: Outfall Structure 54, overall. Signs of erosion around outfall or channel (Routine Maintenance Needed).

Facility Name: Wintersect Hastings



9412: Outfall Structure 54, closeup. Signs of erosion around outfall or channel (Routine Maintenance Needed).



NON-ROUTINE MAINTENANCE COST ESTIMATE STMF0090072 / Wintersect Hastings FY2023 Public BMP Inspections

Date of Inspection: 04/13/2023
Date of Estimate: 09/01/2023
Estimate Prepared by: GKY

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UI	NIT PRICE		COST
	Mowing / Clearing						
1	(includes removal & proper disposal of all woody stock,		0.1 acre	\$	74.00	\$	-
	brush, & trees up to 2-inch diameter)						
	Pond Control Structure/Riser Clearing						
2	(includes removal & disposal of trash, debris, floatables, & other material from directly around and on top of the	0.10	CY	\$	30.00	\$	3.00
	control structure/riser)						
	Pond Low-Flow Channel Clearing (25' Radius)						
2	(includes removal & disposal of trash, debris, floatables, &		5 A	بر ا	101.00	۸.	
3	other material from pond channels & trash rack within 25'		EA	\$	181.00	\$	-
	radius of control structure/riser)						
_	Shoreline Clean-Up						
4	(includes removal & disposal of trash & debris from 15' of wet side and 15' of dry side of WSE)		0.1 acre	\$	750.00	\$	-
5	Trash/Debris Removal & Disposal		CY	\$	164.00	\$	-
	·						
6	Repair/Replace Facility Sign		EA	\$	247.00	\$	-
7	Repair/Replace Facility Sign and Post Installation		EA	\$	329.00	\$	-
16	Hydroseeder (400 - 600 Gallon) with Upland Seed Mix		HR	\$	217.00	\$	-
17	Hydroseeder (400 - 600 Gallon) with Wetland Seed Mix		HR	\$	411.00	\$	-
18	Hydroseeder (400 - 600 Gallon) w/ Co. Supplied Seed Mix		HR	\$	90.00	\$	-
	Pond Low-Flow Channel Clearing (per 25')						
29	(includes removal & disposal of sediment, trash, debris,		25 FT	\$	156.00	\$	
29	floatables, & other material using handheld equipment from		23 F I	۶	130.00	Ş	-
	the pond low-flow channel)						
30	Tree Removal (2" to 6" DBH)		EA	\$	1,316.00	\$	-
31	Tree Removal (7" to 12" DBH)		EA	\$	2,961.00	\$	-
32	Tree Removal (13" to 24" DBH)		EA	\$	4,930.00	\$	-
33	Tree Removal (25" to 36" DBH)		EA	\$	6,250.00	\$	-
34	Stump Removal & Grinding (up to 12")		EA	\$	576.00	\$	-
	Excavation of Sediment						
39	(includes removal & disposal of sediment from the bottom of		CY	\$	150.00	\$	_
33	the existing pond using mechanical means; assumed		Ci	۶	130.00	Ş	-
	potentially hazardous waste)						
40	Animal Burrow Repair		EA	\$	1,316.00	\$	-
53	VDOT Class I Rip-Rap with Fabric Liner		TON	\$	156.00	\$	-
54	VDOT Class II Rip-Rap with Fabric Liner		TON	\$	176.00	\$	-
58	Concrete Removal and Disposal		SF	\$	39.00	\$	-
59	Grouting Cracks and Joints	5.50	LF	\$	189.00	\$	1,039.50
62	Parging (per 50lb bag)	1.00	EA	\$	452.00	\$	452.00
70	Seed Mix		0.1 acre	\$	286.00	\$	_
79	(includes straw mulch and water) Topsoil (3")	0.02	CV	\$		\$	1 40
	Remove & Dispose of Sediment / Debris from Inside	0.02	CY		74.00	Þ	1.48
N/A	Drainage Structures and Pipes		CF	\$	30.00	\$	-
N/A	Install Grouted Class I Rip-Rap		SY	\$	90.00	\$	-
N/A	Install Grouted Class II Rip-Rap		SY	\$	141.00	\$	-
N/A	Fabricate & Install Low-Flow BMP Plate		EA	\$	500.00	\$	-
N/A	Fabricate & Install Low-Flow Trash Rack		EA	\$	500.00	\$	-
N/A	Install HR-2 Handrail		LF	\$	100.00	\$	-
N/A	Install Access Road Gate		EA	\$	2,100.00	\$	-
N/A	Install Post and Cable Barrier		EA	\$	750.00	\$	-
N/A	Install Removable Locking Bollard		EA	\$	950.00	\$ ¢	-

Sub-Total = \$ 1,495.98

Mobilization (5%) = \$ 74.80

Cost Estimate is for reference purposes only. Actual contractor costs may vary.



Extended Detention Pond Inspection Report								
Facility Name	Winte	rsect Poe	Facility ID	STMF0090073	Type of Inspe	ction: Initial Inspection		
Location		8.734922 77.470797	Watershed	Rocky Branch-Broad Run	Previous 48 Hour Precipitation Total	0.00"		
Materials available for inspection	N/A		Owner Notification Date	N/A	Owners/ Owner's Representative	City of Manassas		
Inspectors	gky_n	nfreeman	Date of Inspection	4/13/2023	Date of Last Inspection	4/21/2022		
	Overall Condition Score							
	1	Ade	equate	No deficiencies identified.				
	2	М	onitor	No maintenance may be needed at the time, but might become an issue the future. Will revisit next inspection. Examples include minor erosion small sediment accumulation, or small structural issues of facility components.				
	3	Routine Main	tenance Needed	Facility is functional but preventative maintenance is required. Examples includes vegetation management, minor erosion, or trash/debris removal.				
4	4	Immediate	Repair Needed	Facility is close to or currently not carrying out intended function. Examples include major erosion, significant sediment accumulation, or structural component failure. Repair Immediately				
	N/A Not Applicable Does not pertain to this facility.							
	Remarks							

The bottom of the PSP has rusted out, the PSP is mostly blocked, and there is significant erosion on the dam adjacent to both sides of the PSP. The PSP Replacement was not included in the Cost Estimate. City of Manassas personnel were notified of these issues on the day of the inspection (04/13/2023).

	Inspection Items								
Score	Description	Comment(s) / Corrective Action(s)	Reference Image						
Overall									
1	Inadequate access to complete thorough inspection								
1	Fences are damaged or have vegetation growing on them								
1	Missing or damaged safety signage								
1	Mosquitos								
1	Surrounding drainage area trash/debris/unauthorized substances that might affect facility								
1	Surrounding drainage area erosion that might be related to facility								
	Р	re-Treatment							
1	Buildup of trash or debris								
1	Signs of erosion or exposed soil								
1	Sediment in forebay has reached 50% or more of capacity								
1	Evidence of clogging								
1	Vegetation does not match original design								
		Inlet							
4	Buildup of trash, debris, and sediment	Trash, debris, and sediment accumulating at Inflow 1 (32 Cubic Feet), Inflow Structure 11 (15 Cubic Feet), and Inflow 3 (4 Cubic Feet).	9435, 9439, 9445, 9446						
3	Evidence of erosion or undermining around inlet	A bare spot was observed adjacent to Inflow 3 (12 Square Feet).	9447						
3	Woody growth around inlet structure	Trees observed growing adjacent to Inflow Structure 11 (4, 7-12" trees) and Inflow 3 (1, 2-6" and 2, 13-24" trees).	9439, 9445, 9448, 9450						
1	Evidence of nuisance animals								

Damage to inlet pipe or structure

(5.50 Linear Feet) and Inflow Structure 11 (3.93 Linear Feet). Spalling was observed at Inflow 1 (1 bag of concrete).

9436, 9437, 9440



Score	Description	Comment(s) / Corrective Action(s)	Reference Image						
	Dam Embankment (Includes emergency spillway if applicable)								
3	Woody vegetation on embankment	Trees and other woody vegetation were observed growing on the dam (15, 2-6" 4, 7-12" 5, 13-24" 3, 25-36" trees).	9429						
1	Shrubbery, low growing vegetation, and/or vine material growing on embankment								
1	Sparse vegetative coverage								
4	Signs of erosion, settlement, piping, or slope slippage	Erosion adjacent to the upstream end of the PSP (10.4 CY), erosion adjacent to the downstream end of the PSP (3.3 CY).	9422, 9423, 9432						
1	Signs of seepage, soft spots, and sinkhole formation								
1	Evidence of nuisance animals								
1	Buildup of trash or debris on embankment								
1	Trash, debris, or obstructions in emergency								
	spillway	A/Diagrachura							
4		et/Riser Structure							
1	Low-flow orifice is blocked BMP device is deteriorated, misaligned,								
1	and/or damaged								
1	BMP device is missing								
1	Low-level gate drain is accessible and operational. Drain has been exercised in last three years.								
4	Trash, debris, or other material in BMP device	Trash, debris, and sediment are nearly completely blocking the PSP (4.3 CY).	9419, 9420, 9421						
	Princi	ipal Spillway Pipe							
1	Spillway is blocked by debris or sediment								
4	Evidence of leaking joints	The bottom of the PSP has entirely rusted away.	9421						
1	One or more sections of the pipe have settled to the point that it threatens the integrity of								
	the dam	ent Area and Side Slopes							
1	Buildup of trash and debris								
1	Silt and sedimentation buildup								
1	Ponding area is showing signs of poor health (i.e. nutrient overload, excess aquatic vegetation, or turbidity)								
1	Signs of erosion along shoreline								
3	Low-flow ditch is clogged with sediment/debris	The trickle ditch is clogged with sediment (61 CY).	9442, 9443, 9444						
1	Sections of low-flow dich are cracked or								
1	showing signs of undercutting Sparse vegetation or erosion								
1	Evidence of nuisance animals								
		tructure and Channel							
1	Outflow is causing undercutting or erosion								
1	Outfall structure has separated more than three inches from principal spillway barrel								
А	<u> </u>								
1	Outfall structure is damaged or rusting Woody vegetation growing within 5' of outlet and barrel								
3	Buildup of trash, debris, and sediment around outfall or in channel	Trash, debris, and sediment are accumulating in and adjacent to Outfall Structure 1B (1.33 CY).	9430, 9431						
1	Signs of erosion around outfall or channel								



Facility ID: STMF0090073 Inspection Date: 04/13/2023





9414: Facility Overall.



9415: Facility Overall.



9416: Facility Overall.



9417: Facility Overall.



9418: Facility Overall.



9419: Control Structure 1A, front. Trash, debris, or other material in BMP device (Immediate Repair Needed).



9420: Control Structure 1A, closeup. Trash, debris, or other material in BMP device (Immediate Repair Needed).



9421: Control Structure 1A, inside. Trash, debris, or other material in BMP device (Immediate Repair Needed). Extreme Invert Erosion Observed (Immediate Repair Needed).



9422: Control Structure 1A, closeup. Signs of erosion, settlement, piping, or slope slippage (Immediate Repair Needed).



9423: Control Structure 1A, closeup. Signs of erosion, settlement, piping, or slope slippage (Immediate Repair Needed).



9424: From Control Structure 1A, looking upstream.



9425: Facility Overall.



9426: Facility Overall.



9427: Facility Overall.



9428: Dam Overall.



9429: Dam Overall. Woody vegetation on the embankment (Routine Maintenance Needed).



9430: Outfall Structure 1B, front. Buildup of trash, debris, and sediment around the outfall or in the channel (Routine Maintenance Needed).



9431: Outfall Structure 1B, inside. Buildup of trash, debris, and sediment around the outfall or in the channel (Routine Maintenance Needed).



9432: Outfall Structure 1B, closeup. Signs of erosion, settlement, piping, or slope slippage (Immediate Repair Needed).



9433: From Outfall Structure 1B, looking downstream.



9434: Dam Overall. Woody vegetation on the embankment (Routine Maintenance Needed).



9435: Inflow 1, front. Buildup of trash, debris, and sediment (Immediate Repair Needed).



9436: Inside Inflow 1. Joint Separation (Immediate Repair Needed). Buildup of trash, debris, and sediment (Immediate Repair Needed).



9437: Inflow 1, closeup. Damage to inlet pipe or structure (Routine Maintenance Needed).



9438: From Inflow 1, looking downstream.



9439: Inflow Structure 11, front. Buildup of trash, debris, and sediment (Routine Maintenance Needed).

Woody growth around inlet structure (Routine Maintenance Needed).



9440: Inside Inflow Structure 11. Joint Misalignment (Routine Maintenance Needed)



9441: From Inflow Structure 11, looking downstream.



9442: Looking upstream along the Trickle Ditch toward Inflow 3. Low-flow ditch is clogged with sediment/debris (Routine Maintenance Needed).



9443: Looking downstream along the Trickle Ditch toward Control Structure 1A. Low-flow ditch is clogged with sediment/debris (Routine Maintenance Needed).



9444: Looking downstream along the Trickle Ditch toward Control Structure 1A. Low-flow ditch is clogged with sediment/debris (Routine Maintenance Needed).



9445: Inflow 3, front. Woody growth around inlet structure (Routine Maintenance Needed). Buildup of trash, debris, and sediment (Routine Maintenance Needed).



9446: Inside Inflow 3. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



9447: Inflow 3, closeup. Evidence of erosion or undermining around the inlet (Routine Maintenance Needed).



9448: Inflow 3, closeup. Woody growth around inlet structure (Routine Maintenance Needed).



9449: From Inflow 3, looking downstream.



9450: Inflow 3, closeup. Woody growth around inlet structure (Routine Maintenance Needed).



9451: From Inflow 3, looking downstream.



9452: Facility Overall.



NON-ROUTINE MAINTENANCE COST ESTIMATE 00XX / 00XXXX

FY2023 Public BMP Inspections

Date of Inspection: xx/xx/2023
Date of Estimate: xx/xx/2023
Estimate Prepared by: GKY

		Estimate Prepared						
Includes removal & proper disposal of all woody stock, boss. & trees up to 2-inch diameted Pond Control Structure/Riser Clearing Includes removal & disposal of trash, debris, floatables, & other material from directly around and on top of the control structure/Riser Clearing Includes removal & disposal of trash, debris, floatables, & other material from ginectly around and on top of the control structure/Riser) Pond Low-Flow Channel Clearing (25' Radius) Includes removal & disposal of trash, debris, floatables, & other material from gond channels & trash rack within 25' addition of control structure/Riser) Pond Low-Flow Channel Clearing (25' Radius) Includes removal & disposal of trash & debris from 15' of west dise and 15' of forly side of WS1) O.1 acre 5 750.00 5	ITEM NO.	DESCRIPTION	QUANTITY	UNIT	U	NIT PRICE		COST
Pond Control Structure/Riser Clearing	1	(includes removal & proper disposal of all woody stock,		0.1 acre	\$	74.00	\$	-
Section Sect	2	Pond Control Structure/Riser Clearing (includes removal & disposal of trash, debris, floatables, & other material from directly around and on top of the	4.30	CY	\$	30.00	\$	129.00
4	3	(includes removal & disposal of trash, debris, floatables, & other material from pond channels & trash rack within 25' radius of control structure/riser)		EA	\$	181.00	\$	-
Trash/Debris Removal & Disposal CY \$ 164.00 \$	4	(includes removal & disposal of trash & debris from 15' of		0.1 acre	\$	750.00	\$	-
Repair/Replace Facility Sign and Post Installation	5			CY	\$	164.00	\$	-
Repair/Replace Facility Sign and Post Installation	6	Repair/Replace Facility Sign		EA	\$	247.00	\$	-
Hydroseeder (400 - 600 Gallon) with Upland Seed Mix	7	Repair/Replace Facility Sign and Post Installation		EA	ł	329.00		
17	16			HR				_
Pond Low-Flow Channel Clearing (per 25') (Includes removal & disposal of sediment, trash, debris, floatables, & other material using handheld equipment from the pond low-flow channel)								
Pond Low-Flow Channel Clearing (per 25') (includes removal & disposal of sediment, trash, debris, floatables, & other material using handheld equipment from the pond low-flow channel)	17			пк	Ş			
29	18	Hydroseeder (400 - 600 Gallon) w/ Co. Supplied Seed Mix		HR	\$	90.00	\$	-
Tree Removal (7" to 12" DBH)	29	(includes removal & disposal of sediment, trash, debris, floatables, & other material using handheld equipment from		25 FT	\$	156.00	\$	-
Tree Removal (13" to 24" DBH) 7.00 EA	30	Tree Removal (2" to 6" DBH)	16.00	EA	\$	1,316.00	\$	21,056.00
33 Tree Removal (25" to 36" DBH) 3.00 EA	31	Tree Removal (7" to 12" DBH)	8.00	EA	\$	2,961.00	\$	23,688.00
Stump Removal & Grinding (up to 12")	32	Tree Removal (13" to 24" DBH)	7.00	EA	\$	4,930.00	\$	34,510.00
Stump Removal & Grinding (up to 12")	33	Tree Removal (25" to 36" DBH)	3.00	EA	\$	6,250.00	\$	18,750.00
Excavation of Sediment (includes removal & disposal of sediment from the bottom of the existing pond using mechanical means; assumed potentially hazardous waste)	34	Stump Removal & Grinding (up to 12")		FA	-			-
53 VDOT Class I Rip-Rap with Fabric Liner TON \$ 156.00 \$ - 54 VDOT Class II Rip-Rap with Fabric Liner TON \$ 176.00 \$ - 58 Concrete Removal and Disposal SF \$ 39.00 \$ - 59 Grouting Cracks and Joints 9.50 LF \$ 189.00 \$ 1,795.50 62 Parging (per 50lb bag) 1.00 EA \$ 452.00 \$ 452.00 70 Seed Mix (includes straw mulch and water) 0.1 acre \$ 286.00 \$ - 79 Topsoil (3") 13.70 CY \$ 74.00 \$ 1,013.80 N/A Remove & Dispose of Sediment / Debris from Inside Drainage Structures and Pipes 51.00 CF \$ 30.00 \$ 1,530.00 N/A Install Grouted Class I Rip-Rap SY \$ 90.00 \$ - N/A Install Grouted Class II Rip-Rap SY \$ 141.00 \$ - N/A Fabricate & Install Low-Flow BMP Plate EA \$ 500.00 \$ - N/A Install HR-2 Handrail LF \$ 100.00 \$ - N/		Excavation of Sediment (includes removal & disposal of sediment from the bottom of the existing pond using mechanical means; assumed	62.33					9,349.50
54 VDOT Class II Rip-Rap with Fabric Liner TON \$ 176.00 \$ - 58 Concrete Removal and Disposal SF \$ 39.00 \$ - 59 Grouting Cracks and Joints 9.50 LF \$ 189.00 \$ 1,795.50 62 Parging (per 50lb bag) 1.00 EA \$ 452.00 \$ 452.00 70 Seed Mix (includes straw mulch and water) 0.1 acre \$ 286.00 \$ - 79 Topsoil (3") 13.70 CY \$ 74.00 \$ 1,013.80 N/A Remove & Dispose of Sediment / Debris from Inside Drainage Structures and Pipes 51.00 CF \$ 30.00 \$ 1,530.00 N/A Install Grouted Class I Rip-Rap SY \$ 90.00 \$ - N/A Install Grouted Class II Rip-Rap SY \$ 141.00 \$ - N/A Fabricate & Install Low-Flow BMP Plate EA \$ 500.00 \$ - N/A Install HR-2 Handrail LF \$ 100.00 \$ - N/A Install Access Road Gate EA \$ 750.00 \$ -	40	Animal Burrow Repair		EA	\$	1,316.00	\$	-
54 VDOT Class II Rip-Rap with Fabric Liner TON \$ 176.00 \$ - 58 Concrete Removal and Disposal SF \$ 39.00 \$ - 59 Grouting Cracks and Joints 9.50 LF \$ 189.00 \$ 1,795.50 62 Parging (per 50lb bag) 1.00 EA \$ 452.00 \$ 452.00 70 Seed Mix (includes straw mulch and water) 0.1 acre \$ 286.00 \$ - 79 Topsoil (3") 13.70 CY \$ 74.00 \$ 1,013.80 N/A Remove & Dispose of Sediment / Debris from Inside Drainage Structures and Pipes 51.00 CF \$ 30.00 \$ 1,530.00 N/A Install Grouted Class I Rip-Rap SY \$ 90.00 \$ - N/A Install Grouted Class II Rip-Rap SY \$ 141.00 \$ - N/A Fabricate & Install Low-Flow BMP Plate EA \$ 500.00 \$ - N/A Install HR-2 Handrail LF \$ 100.00 \$ - N/A Install Access Road Gate EA \$ 750.00 \$ -	53	VDOT Class I Rip-Rap with Fabric Liner		TON	\$		\$	-
58 Concrete Removal and Disposal SF \$ 39.00 \$ - 59 Grouting Cracks and Joints 9.50 LF \$ 189.00 \$ 1,795.50 62 Parging (per 50lb bag) 1.00 EA \$ 452.00 \$ 452.00 70 Seed Mix (includes straw mulch and water) 0.1 acre \$ 286.00 \$ - 79 Topsoil (3") 13.70 CY \$ 74.00 \$ 1,013.80 N/A Remove & Dispose of Sediment / Debris from Inside Drainage Structures and Pipes 51.00 CF \$ 30.00 \$ 1,530.00 N/A Install Grouted Class I Rip-Rap SY \$ 90.00 \$ - N/A Install Grouted Class I Rip-Rap SY \$ 141.00 \$ - N/A Fabricate & Install Low-Flow BMP Plate EA \$ 500.00 \$ - N/A Install HR-2 Handrail LF \$ 100.00 \$ - N/A Install Access Road Gate EA \$ 2,100.00 \$ - N/A Install Post and Cable Barrier EA \$ 750.00 \$ -				TON				
59 Grouting Cracks and Joints 9.50 LF \$ 189.00 \$ 1,795.50 62 Parging (per 50lb bag) 1.00 EA \$ 452.00 \$ 452.00 70 Seed Mix (includes straw mulch and water) 0.1 acre \$ 286.00 \$ - 79 Topsoil (3") 13.70 CY \$ 74.00 \$ 1,013.80 N/A Remove & Dispose of Sediment / Debris from Inside Drainage Structures and Pipes 51.00 CF \$ 30.00 \$ 1,530.00 N/A Install Grouted Class I Rip-Rap SY \$ 90.00 \$ - N/A Install Grouted Class II Rip-Rap SY \$ 141.00 \$ - N/A Fabricate & Install Low-Flow BMP Plate EA \$ 500.00 \$ - N/A Install HR-2 Handrail LF \$ 100.00 \$ - N/A Install Access Road Gate EA \$ 2,100.00 \$ - N/A Install Post and Cable Barrier EA \$ 750.00 \$ -		· ·						
1.00 EA \$ 452.00 \$ 452.00			0.50					1 705 50
Topsoil (3") 13.70 CY \$ 74.00 \$ 1,013.80		-						
79 Topsoil (3") 13.70 CY \$ 74.00 \$ 1,013.80 N/A Remove & Dispose of Sediment / Debris from Inside Drainage Structures and Pipes 51.00 CF \$ 30.00 \$ 1,530.00 N/A Install Grouted Class I Rip-Rap SY \$ 90.00 \$ - N/A Install Grouted Class II Rip-Rap SY \$ 141.00 \$ - N/A Fabricate & Install Low-Flow BMP Plate EA \$ 500.00 \$ - N/A Install HR-2 Handrail LF \$ 100.00 \$ - N/A Install Access Road Gate EA \$ 2,100.00 \$ - N/A Install Post and Cable Barrier EA \$ 750.00 \$ -		Seed Mix	1.00					452.00
N/ARemove & Dispose of Sediment / Debris from Inside Drainage Structures and Pipes51.00CF\$ 30.00\$ 1,530.00N/AInstall Grouted Class I Rip-RapSY\$ 90.00\$ -N/AInstall Grouted Class II Rip-RapSY\$ 141.00\$ -N/AFabricate & Install Low-Flow BMP PlateEA\$ 500.00\$ -N/AInstall HR-2 HandrailLF\$ 100.00\$ -N/AInstall Access Road GateEA\$ 2,100.00\$ -N/AInstall Post and Cable BarrierEA\$ 750.00\$ -	79	· · · · · · · · · · · · · · · · · · ·	13.70	CY	Ś	74.00	\$	1.013 80
N/A Install Grouted Class I Rip-Rap SY \$ 90.00 \$ - N/A Install Grouted Class II Rip-Rap SY \$ 141.00 \$ - N/A Fabricate & Install Low-Flow BMP Plate EA \$ 500.00 \$ - N/A Install HR-2 Handrail LF \$ 100.00 \$ - N/A Install Access Road Gate EA \$ 2,100.00 \$ - N/A Install Post and Cable Barrier EA \$ 750.00 \$ -	_	Remove & Dispose of Sediment / Debris from Inside						
N/A Fabricate & Install Low-Flow BMP Plate EA \$ 500.00 \$ - N/A Fabricate & Install Low-Flow Trash Rack EA \$ 500.00 \$ - N/A Install HR-2 Handrail LF \$ 100.00 \$ - N/A Install Access Road Gate EA \$ 2,100.00 \$ - N/A Install Post and Cable Barrier EA \$ 750.00 \$ -	N/A	Install Grouted Class I Rip-Rap		SY	\$	90.00	\$	
N/A Fabricate & Install Low-Flow Trash Rack EA \$ 500.00 \$ - N/A Install HR-2 Handrail LF \$ 100.00 \$ - N/A Install Access Road Gate EA \$ 2,100.00 \$ - N/A Install Post and Cable Barrier EA \$ 750.00 \$ -					-		<u> </u>	-
N/A Install HR-2 Handrail LF \$ 100.00 \$ - N/A Install Access Road Gate EA \$ 2,100.00 \$ - N/A Install Post and Cable Barrier EA \$ 750.00 \$ -					-			
N/A Install Access Road Gate EA \$ 2,100.00 \$ - N/A Install Post and Cable Barrier EA \$ 750.00 \$ -					1			-
N/A Install Post and Cable Barrier EA \$ 750.00 \$ -					_		_	<u> </u>
N/A Install Removable Locking Bollard EA \$ 950.00 \$ -								
		Install Removable Locking Bollard		EA	\$	950.00	\$	

Sub-Total = \$ 112,273.80

Mobilization (5%) = \$ 5,613.69

Cost Estimate is for reference purposes only. Actual contractor costs may vary.



Extended Detention Pond Inspection Report							
Facility Name	Kins	ley Mill	Facility ID	STMF0090075	Type of Inspe	ction: Initial Inspection	
Location		8.738569 77.461437	Watershed	Lake Jackson-Occoquan River	Previous 48 Hour Precipitation Total	0.00"	
Materials available for		N/A	Owner Notification Date	N/A	Owners/ Owner's Representative	City of Manassas	
Inspectors	gky_n	nfreeman	Date of Inspection	4/11/2023	Date of Last Inspection	12/21/2021	
				III Condition Score	Inspection		
	1	Ade	equate	No deficiencies identified.			
	2	Мо	onitor	No maintenance may be needed at the time, but might become an issue in the future. Will revisit next inspection. Examples include minor erosion, small sediment accumulation, or small structural issues of facility components.			
3	3	Routine Main	tenance Needed			nance is required. Examples ion, or trash/debris removal.	
	4	Immediate	Repair Needed	include major erosion,		t intended function. Examples accumulation, or structural mmediately	
	N/A	Not A	pplicable	·	es not pertain to this	-	
	IN/A	NOT A	pplicable	Remarks	es not pertain to this	raciity.	
	The pipe	e invert in Inflov		been eroded through (No	ot included in Cost Est	timate).	
Score	ī	Description		spection Items	estive Action(s)	Deference Image	
Score		Description	n	Comment(s) / Corre	ective Action(s)	Reference Image	
1	Inadequa		plete thorough				
1	Fences a	inspection e damaged or h	ave vegetation				
1	Missin	growing on the g or damaged sa					
1	Missing or damaged safety signage Mosquitos						
1	Surrounding drainage area trash/debris/unauthorized substances that might affect facility						
1	Surrounding		erosion that might				
			Р	re-Treatment			
1	Ві	uildup of trash o	r debris				
1	_	of erosion or e	•				
1	Sediment	in forebay has more of capa	reached 50% or city				
1		Evidence of clo	gging				
1	Vegetation	n does not matc	h original design				
				Inlet			
3	Buildup of trash, debris, and sedim			(75 Square Feet), deb accumulating adjacent of Feet), Vegetation grow Inflow 3 (20 Square F sediment accumulating of (3 Cubic Feet), debri accumulating adjacent to	ris and sediment to Inflow 2 (8 Cubic ing in the riprap at Feet), debris and adjacent to Inflow 4 is and sediment o Inflow Structure E-	2868, 2869, 2874, 2875, 2877, 2881, 2883, 2885, 2887	
1	Evidence o	f erosion or und inlet	ermining around				
3	Woody growth around inlet structure			Tree root intrusion inside was observed growin structure (1, 7-	g adjacent to the	2881, 2884	
1	Evic	lence of nuisand	e animals	, ,	•		
	•						



Damage to inlet pipe or structure

The apron and pipe of Inflow 2 are beginning to rust. The pipe in Inflow Structure E-3 has almost completely rusted away.

2872, 2886



Score	Description	Comment(s) / Corrective Action(s)	Reference Image
	-	des emergency spillway if applicable)	
1	Woody vegetation on embankment		
1	Shrubbery, low growing vegetation, and/or vine material growing on embankment		
1	Sparse vegetative coverage		
1	Signs of erosion, settlement, piping, or slope slippage		
1	Signs of seepage, soft spots, and sinkhole formation		
1	Evidence of nuisance animals		
1	Buildup of trash or debris on embankment		
1	Trash, debris, or obstructions in emergency spillway		
		et/Riser Structure	
1	Low-flow orifice is blocked		
3	BMP device is deteriorated, misaligned, and/or damaged	The anti-rust coating in the PSP is wearing away, and the pipe is beginning to rust.	2865
1	BMP device is missing		
1	Low-level gate drain is accessible and operational. Drain has been exercised in last three years.		
1	Trash, debris, or other material in BMP device		
	Princ	ipal Spillway Pipe	
1	Spillway is blocked by debris or sediment		
1	Evidence of leaking joints		
1	One or more sections of the pipe have settled to the point that it threatens the integrity of the dam		
		ent Area and Side Slopes	
1	Buildup of trash and debris		
1	Silt and sedimentation buildup		
1	Ponding area is showing signs of poor health (i.e. nutrient overload, excess aquatic vegetation, or turbidity)		
1	Signs of erosion along shoreline		
3	Low-flow ditch is clogged with sediment/debris	The trickle ditch is clogged with sediment, debris, and vegetation (231 Linear Feet). Spalling and cracking were observed on the	2866, 2867, 2880
3	Sections of low-flow dich are cracked or showing signs of undercutting	trickle ditch (1 bag of concrete). Erosion was also observed adjacent to the trickle ditch (0.45 Cubic Yards).	2888
3	Sparse vegetation or erosion	A bare spot was observed on the facility's Eastern embankment (320 Square Feet).	2878
1	Evidence of nuisance animals		
	Outfall St	tructure and Channel	
1	Outflow is causing undercutting or erosion		
1	Outfall structure has separated more than three inches from principal spillway barrel		
3	Outfall structure is damaged or rusting	The anti-rust coating in the PSP is wearing away, and the pipe is beginning to rust.	2890
1	Woody vegetation growing within 5' of outlet and barrel		
1	Buildup of trash, debris, and sediment around outfall or in channel		
1	Signs of erosion around outfall or channel		

Facility ID: STMF0090075 Inspection Date: 04/11/2023





2863: Facility Overall.



2864: Control Structure E-2, front.



2865: Inside Control Structure E-2. BMP device is deteriorated, misaligned, and/or damaged (Routine Maintenance Needed).



2866: From Control Structure E-2, looking upstream. Low-flow ditch is clogged with sediment/debris (Routine Maintenance Needed).



2867: Facility Overall. Low-flow ditch is clogged with sediment/debris (Routine Maintenance Needed).



2868: Looking upstream along Inflow 1. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



2869: From Inflow 1, looking downstream. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



2870: From Inflow 1, looking upstream.



2871: Sign, closeup.



2872: Inflow 2, front. Damage to inlet pipe or structure (Monitor).



2873: Inside Inflow 2.



2874: From Inflow 2, looking downstream. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



2875: Inflow 3, front. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



2876: Inside Inflow 3.



2877: From Inflow 3, looking downstream. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



2878: Facility Overall. Sparse vegetation or erosion (Routine Maintenance Needed).



2879: Looking upstream along the Trickle Ditch toward Inflow 4.



2880: Looking downstream along the Trickle Ditch toward Control Structure E-2. Low-flow ditch is clogged with sediment/debris (Routine Maintenance Needed).



2881: Inflow 4, front. Woody growth around inlet structure (Routine Maintenance Needed).



2882: Inside Inflow 4.



2883: From Inflow 4, looking downstream. Buildup of trash, debris, and sediment (Monitor).



2884: Inflow 4, closeup. Woody growth around inlet structure (Routine Maintenance Needed).



2885: Inflow E-3, front. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



2886: Inside Inflow E-3. Damage to inlet pipe or structure (Immediate Repair Needed).



2887: From Inflow E-3, looking downstream. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



2888: Trickle Ditch, closeup. Sections of the low-flow dich are cracked or showing signs of undercutting (Routine Maintenance Needed).



2889: Outfall Structure E-1, front.



2890: Outfall Structure E-1, inside. Outfall structure is damaged or rusting (Routine Maintenance Needed).



2891: From Outfall Structure E-1, looking downstream.



NON-ROUTINE MAINTENANCE COST ESTIMATE STMF0090075/ Kinsley Mill

FY2023 Public BMP Inspections

Date of Inspection: 04/11/2023 Date of Estimate: 09/05/2023 Estimate Prepared by: GKY

ITEM NO.	DESCRIPTION Estimate Prepared	QUANTITY	UNIT	UI	NIT PRICE		COST
	Mowing / Clearing						
1	(includes removal & proper disposal of all woody stock,	0.10	0.1 acre	\$	74.00	\$	7.40
	brush, & trees up to 2-inch diameter)						
	Pond Control Structure/Riser Clearing (includes removal & disposal of trash, debris, floatables, &						
2	other material from directly around and on top of the		CY	\$	30.00	\$	-
	control structure/riser)						
	Pond Low-Flow Channel Clearing (25' Radius)						
_	(includes removal & disposal of trash, debris, floatables, &			,	101.00		
3	other material from pond channels & trash rack within 25'		EA	\$	181.00	\$	-
	radius of control structure/riser)						
	Shoreline Clean-Up						
4	(includes removal & disposal of trash & debris from 15' of		0.1 acre	\$	750.00	\$	-
	wet side and 15' of dry side of WSE)			 			
5	Trash/Debris Removal & Disposal		CY	\$	164.00	\$	-
6	Repair/Replace Facility Sign		EA	\$	247.00	\$	-
7	Repair/Replace Facility Sign and Post Installation		EA	\$	329.00	\$	-
16	Hydroseeder (400 - 600 Gallon) with Upland Seed Mix		HR	\$	217.00	\$	-
17	Hydroseeder (400 - 600 Gallon) with Wetland Seed Mix		HR	\$	411.00	\$	-
18	Hydroseeder (400 - 600 Gallon) w/ Co. Supplied Seed Mix		HR	\$	90.00	\$	-
	Pond Low-Flow Channel Clearing (per 25')						
20	(includes removal & disposal of sediment, trash, debris,	0.24	25.57	ب ا	456.00	,	4 444 44
29	floatables, & other material using handheld equipment from	9.24	25 FT	\$	156.00	\$	1,441.44
	the pond low-flow channel)						
30	Tree Removal (2" to 6" DBH)		EA	\$	1,316.00	\$	-
31	Tree Removal (7" to 12" DBH)	1.00	EA	\$	2,961.00	\$	2,961.00
32	Tree Removal (13" to 24" DBH)		EA	\$	4,930.00	\$	-
33	Tree Removal (25" to 36" DBH)		EA	\$	6,250.00	\$	-
34	Stump Removal & Grinding (up to 12")		EA	\$	576.00	\$	-
	Excavation of Sediment						
39	(includes removal & disposal of sediment from the bottom of		CY	\$	150.00	\$	_
	the existing pond using mechanical means; assumed			*		*	
40	potentially hazardous waste)		F.A.	<u>,</u>	1 24 6 00	<u>,</u>	
40 53	Animal Burrow Repair VDOT Class I Rip-Rap with Fabric Liner		EA TON	\$	1,316.00 156.00	\$	-
54	VDOT Class II Rip-Rap with Fabric Liner		TON	\$	176.00	\$	-
58	Concrete Removal and Disposal		SF	\$	39.00	\$	<u> </u>
59	Grouting Cracks and Joints		LF	\$	189.00	\$	
62	Parging (per 50lb bag)	1.00	EA	\$	452.00	\$	452.00
	Seed Mix						
70	(includes straw mulch and water)	0.10	0.1 acre	\$	286.00	\$	28.60
79	Topsoil (3") Remove & Dispose of Sediment / Debris from Inside	0.45	CY	\$	74.00	\$	33.30
N/A	Drainage Structures and Pipes	18.00	CF	\$	30.00	\$	540.00
N/A	Install Grouted Class I Rip-Rap		SY	\$	90.00	\$	
N/A	Install Grouted Class II Rip-Rap		SY	\$	141.00	\$	-
N/A	Fabricate & Install Low-Flow BMP Plate		EA	\$	500.00	\$	-
N/A	Fabricate & Install Low-Flow Trash Rack		EA	\$	500.00	\$	-
N/A	Install HR-2 Handrail		LF	\$	100.00	\$	
N/A	Install Access Road Gate		EA	\$	2,100.00	\$	-
N/A	Install Post and Cable Barrier		EA	\$	750.00	\$	-
N/A	Install Removable Locking Bollard		EA	\$	950.00 o-Total =	\$ \$	5,463.74

Sub-Total = \$ 5,463.74

Mobilization (5%) = \$ 273.19

Cost Estimate is for reference purposes only. Actual contractor costs may vary.



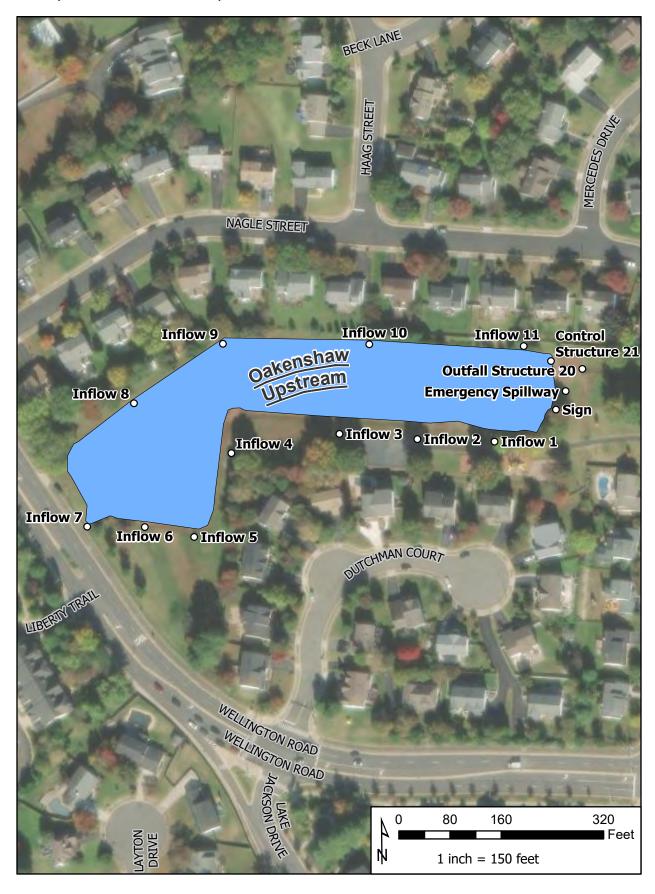
attended to the control of the contr									
Extended Detention Pond Inspection Report									
Facility Name	Oakensha	aw Upstream	Facility ID	STMF0090077	Type of Inspec	Type of Inspection: Initial Inspection			
Location		8.743608 77.464085	Watershed	Lower Bull Run	Previous 48 Hour Precipitation Total	0.35"			
Materials available for inspection		N/A	Owner Notification Date	N/A	Owners/ Owner's Representative	City of Manassas			
Inspectors	gky_n	nfreeman	Date of Inspection	6/28/2023	Date of Last Inspection	3/5/2021			
	Overall Condition Score								
	1	Ado	equate		No deficiencies identified.				
	2	M	onitor	No maintenance may be needed at the time, but might become an issue in the future. Will revisit next inspection. Examples include minor erosion, small sediment accumulation, or small structural issues of facility components.					
3	Routine Maintenance Needed Facility is functional but preventative maintenance is required. Examples includes vegetation management, minor erosion, or trash/debris removal								
	4	Immediate	Repair Needed	Facility is close to or currently not carrying out intended function. Examples include major erosion, significant sediment accumulation, or structural component failure. Repair Immediately					
	N/A	Not A	pplicable	[Does not pertain to this f	facility.			
				Remarks					

	Inspection Items							
Score	Description	Comment(s) / Corrective Action(s)	Reference Image					
		Overall						
1	Inadequate access to complete thorough inspection							
1	Fences are damaged or have vegetation growing on them							
1	Missing or damaged safety signage							
1	Mosquitos							
1	Surrounding drainage area trash/debris/unauthorized substances that might affect facility							
1	Surrounding drainage area erosion that might be related to facility							
	P	re-Treatment						
1	Buildup of trash or debris							
1	Signs of erosion or exposed soil							
1	Sediment in forebay has reached 50% or more of capacity							
1	Evidence of clogging							
1	Vegetation does not match original design							
		Inlet						
3	Buildup of trash, debris, and sediment	Inflow 1 (3 Cubic Feet), Inflow 2 (3 Cubic Feet), Inflow 3 (3 Cubic Feet), Inflow 4 (1 Cubic Foot), Inflow 8 (6 Cubic Feet).	4630, 4631, 4633, 4634, 4639, 4640, 4645, 4663, 4665					
1	Evidence of erosion or undermining around inlet							
1	Woody growth around inlet structure							
1	Evidence of nuisance animals							
3	Damage to inlet pipe or structure	Spalling was observed at Inflow 8 (use 1 bag of concrete). Joint separation was observed inside Inflow 8 (3.93 Linear Feet) and Inflow 9 (6.28 Linear Feet).	4663, 4664, 4670					



Score	Description	Comment(s) / Corrective Action(s)	Reference Image
Dam Embankment (Includes emergency spillway if applicable)			
1	Woody vegetation on embankment		
1	Shrubbery, low growing vegetation, and/or vine material growing on embankment		
3	Sparse vegetative coverage	Bare spots observed on the dam, 20x4', 30x7' (290 Square Feet)	4622, 4629
1	Signs of erosion, settlement, piping, or slope slippage		
1	Signs of seepage, soft spots, and sinkhole formation		
1	Evidence of nuisance animals		
1	Buildup of trash or debris on embankment		
1	Trash, debris, or obstructions in emergency spillway		
Outlet/Riser Structure			
3	Low-flow orifice is blocked	Sediment, debris, and vegetation are accumulating at the low-flow orifices(Approximately 6 CF or 0.22 CY).	4610
1	BMP device is deteriorated, misaligned, and/or damaged		
1	BMP device is missing		
1	Low-level gate drain is accessible and operational. Drain has been exercised in last three years.		
1	Trash, debris, or other material in BMP device		
Principal Spillway Pipe			
1	Spillway is blocked by debris or sediment		
1	Evidence of leaking joints		
	One or more sections of the pipe have settled		
1	to the point that it threatens the integrity of the dam		
Impoundment Area and Side Slopes			
1	Buildup of trash and debris		
1	Silt and sedimentation buildup		
1	Ponding area is showing signs of poor health (i.e. nutrient overload, excess aquatic		
	vegetation, or turbidity)		
1	Signs of erosion along shoreline		
1	Low-flow ditch is clogged with sediment/debris		
1	Sections of low-flow dich are cracked or showing signs of undercutting		
3	Sparse vegetation or erosion	Bare spots observed on the Pond Floor (Approximately 1,300 Square Feet)	
1	Evidence of nuisance animals		
Outfall Structure and Channel			
1	Outflow is causing undercutting or erosion		
1	Outfall structure has separated more than three inches from principal spillway barrel		
1	Outfall structure is damaged or rusting		
1	Woody vegetation growing within 5' of outlet and barrel		
1	Buildup of trash, debris, and sediment around outfall or in channel		
1	Signs of erosion around outfall or channel		

Facility ID: STMF0090077 Inspection Date: 06/28/2023





4607: Facility Overall.



4608: Facility Overall.



4609: Control Structure 21, front.



4610: Control Structure 21, low-flow orifices close-up. Sediment, debris, and vegetation accumulation. (Routine Maintenance Needed).



4611: Control Structure 21, top.



4612: Inside Control Structure 21.



4613: Inside Control Structure 21, looking upstream toward low-flow orifices.



4614: Inside Control Structure 21, looking upstream toward upper orifices.



4615: Inside Control Structure 21, looking downstream.



4616: Outfall Structure 20, front.



4617: Outfall Structure 20, inside the Southern PSP.



4618: Outfall Structure 20, inside the middle PSP.



4619: Outfall Structure 20, inside the Northern PSP.



4620: From Outfall Structure 20, looking downstream.



4621: Dam Overall.



4622: Dam Overall. Sparse vegetative coverage (Routine Maintenance Needed).



4623: Emergency Spillway, Overall.



4624: Emergency Spillway, looking upstream.



4625: Emergency Spillway, looking downstream.



4626: Sign, closeup.



4627: Facility Overall.



4628: Facility Overall.



4629: Dam Overall. Sparse vegetative coverage (Routine Maintenance Needed).



4630: Inflow 1, front. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4631: Inside Inflow 1. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4632: From Inflow 1, looking downstream.



4633: Inflow 2, front. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4634: Inflow 2, inside the Eastern pipe.



4635: Inflow 2, inside the Western pipe.



4636: From Inflow 2, looking downstream.



4637: Facility Overall.



4638: Facility Overall.



4639: Inflow 3, front. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4640: Inside Inflow 3. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4641: From Inflow 3, looking downstream.



4642: Facility Overall.



4643: Facility Overall.



4644: Inflow 4, front.



4645: Inflow 4, closeup. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4646: Inside Inflow 4.



4647: From Inflow 4, looking downstream.



4648: Inflow 5, front.



4649: Inside Inflow 5.



4650: From Inflow 5, looking downstream.



4651: Facility overall.



4652: Inflow 6, front.



4653: Inside Inflow 6.



4654: From Inflow 6, looking downstream.



4655: Facility Overall.



4656: Inflow 7, front.



4657: Inside Inflow 7.



4658: From Inflow 7, looking downstream.



4659: Facility Overall.



4662: Inflow 8, front.



4663: Inflow 8, closeup. Damage to inlet pipe or structure, Spalling (Routine Maintenance Needed).



4664: Inside Inflow 8. Damage to inlet pipe or structure, Joint separation (Routine Maintenance Needed).



4665: From Inflow 8, looking downstream. Buildup of trash, debris, and sediment (Routine Maintenance Needed).



4666: Pond Floor. Sparse vegetative coverage (Routine Maintenance Needed).



4667: Facility Overall.



4668: Facility Overall.



4669: Inflow 9, front.



4670: Inside Inflow 9. Damage to inlet pipe or structure, Joint separation (Routine Maintenance Needed).



4671: From Inflow 9, looking downstream.



4672: Inflow 10, front.



4673: Inside Inflow 10.



4674: From Inflow 10, looking downstream.



4675: Facility Overall.



4676: Inflow 11, front.

Facility ID: STMF0090077
Facility Name: Oakenshaw Upstream



4677: Inside Inflow 11.



4678: From Inflow 11, looking downstream.



NON-ROUTINE MAINTENANCE COST ESTIMATE STMF0090077 / Oakenshaw Upstream FY2023 Public BMP Inspections

Date of Inspection: 06/28/2023

Date of Estimate: 09/01/2023
Estimate Prepared by: GKY

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UI	NIT PRICE		COST
	Mowing / Clearing						
1	(includes removal & proper disposal of all woody stock,		0.1 acre	\$	74.00	\$	-
	brush, & trees up to 2-inch diameter) Pond Control Structure/Riser Clearing						
	(includes removal & disposal of trash, debris, floatables, &						
2	other material from directly around and on top of the	0.22	CY	\$	30.00	\$	6.60
	control structure/riser)						
,	Pond Low-Flow Channel Clearing (25' Radius)						
2	(includes removal & disposal of trash, debris, floatables, &		5 4	بر ا	101.00	.	
3	other material from pond channels & trash rack within 25'		EA	\$	181.00	\$	-
	radius of control structure/riser)						
	Shoreline Clean-Up						
4	(includes removal & disposal of trash & debris from 15' of		0.1 acre	\$	750.00	\$	-
	wet side and 15' of dry side of WSE)		6)/	_	464.00		
5	Trash/Debris Removal & Disposal		CY	\$	164.00	\$	-
6	Repair/Replace Facility Sign		EA	\$	247.00	\$	-
7	Repair/Replace Facility Sign and Post Installation		EA	\$	329.00	\$	-
16	Hydroseeder (400 - 600 Gallon) with Upland Seed Mix		HR	\$	217.00	\$	-
17	Hydroseeder (400 - 600 Gallon) with Wetland Seed Mix		HR	\$	411.00	\$	-
18	Hydroseeder (400 - 600 Gallon) w/ Co. Supplied Seed Mix		HR	\$	90.00	\$	-
	Pond Low-Flow Channel Clearing (per 25')						
	(includes removal & disposal of sediment, trash, debris,						
29	floatables, & other material using handheld equipment from		25 FT	\$	156.00	\$	-
	the pond low-flow channel)						
30	Tree Removal (2" to 6" DBH)		EA	\$	1,316.00	\$	-
31	Tree Removal (7" to 12" DBH)		EA	\$	2,961.00	\$	-
32	Tree Removal (13" to 24" DBH)		EA	\$	4,930.00	\$	-
33	Tree Removal (25" to 36" DBH)		EA	\$	6,250.00	\$	-
34	Stump Removal & Grinding (up to 12")		EA	\$	576.00	\$	-
	Excavation of Sediment						
39	(includes removal & disposal of sediment from the bottom of		CY	\$	150.00	\$	_
33	the existing pond using mechanical means; assumed		Ci		130.00	Ţ	
	potentially hazardous waste)			_			
40	Animal Burrow Repair		EA	\$	1,316.00	\$	-
53	VDOT Class I Rip-Rap with Fabric Liner		TON	\$	156.00	\$	-
54	VDOT Class II Rip-Rap with Fabric Liner		TON	\$	176.00	\$	-
58	Concrete Removal and Disposal	11.00	SF	\$	39.00	\$	- 2 070 00
59	Grouting Cracks and Joints	11.00	LF	\$	189.00	\$	2,079.00
62	Parging (per 50lb bag)	1.00	EA	\$	452.00	\$	452.00
70	Seed Mix (includes straw mulch and water)	0.30	0.1 acre	\$	286.00	\$	85.80
79	Topsoil (3")		CY	\$	74.00	\$	-
N/A	Remove & Dispose of Sediment / Debris from Inside Drainage Structures and Pipes	16.00	CF	\$	30.00	\$	480.00
N/A	Install Grouted Class I Rip-Rap		SY	\$	90.00	\$	-
N/A	Install Grouted Class II Rip-Rap		SY	\$	141.00	\$	-
N/A	Fabricate & Install Low-Flow BMP Plate		EA	\$	500.00	\$	-
N/A	Fabricate & Install Low-Flow Trash Rack		EA	\$	500.00	\$	-
N/A	Install HR-2 Handrail		LF	\$	100.00	\$	
			- A	4	2 400 00	ċ	
N/A	Install Access Road Gate		EA	\$	2,100.00	\$	-
-	Install Access Road Gate Install Post and Cable Barrier		EA	\$	750.00	\$	<u> </u>

Sub-Total = \$ 3,103.40

Mobilization (5%) = \$ 155.17



Extended Detention Pond Inspection Report										
Facility Name	Oakenshav	v Downstream	Facility ID	STMF0090078	Type of Inspection: Initial Inspection					
Location		8.742812 77.455838	Watershed	Lower Bull Run	Previous 48 Hour Precipitation Total 0.35"					
Materials available for inspection	ı	N/A	Owner Notification Date	N/A	Owners/ Owner's Representative City of Manassas					
Inspectors	gky_n	nfreeman	Date of Inspection	6/28/2023	Date of Last Inspection 3/5/2021					
	Overall Condition Score									
	1	Ade	equate		No deficiencies ident	ified.				
	2	М	onitor	No maintenance may be needed at the time, but might become an issue in the future. Will revisit next inspection. Examples include minor erosion, small sediment accumulation, or small structural issues of facility components.						
	Routine Maintenance Needed Facility is functional but preventative maintenance is required. Examples includes vegetation management, minor erosion, or trash/debris removal									
4	4	Immediate	Repair Needed	Facility is close to or currently not carrying out intended function. Examples include major erosion, significant sediment accumulation, or structural component failure. Repair Immediately						
	N/A Not Applicable Does not pertain to this facility.									
	Remarks									

Score Description Comment(s) / Corrective Action(s) Inadequate access to complete thorough inspection growing on them	Inspection Items							
Inadequate access to complete thorough inspection Fences are damaged or have vegetation growing on them Missing or damaged safety signage Mosquitos Surrounding drainage area trash/debris/unauthorized substances that might affect facility Surrounding drainage area erosion that might be related to facility Pre-Treatment Buildup of trash or debris Signs of erosion or exposed soil Sediment in forebay has reached 50% or more of capacity Evidence of clogging Vegetation does not match original design Inlet Buildup of trash, debris, and sediment Evidence of erosion or undermining around	Reference Image							
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Buildup of trash, debris, and sediment Evidence of erosion or undermining around								
Evidence of erosion or undermining around								
1								
inlet								
1 Woody growth around inlet structure								
1 Evidence of nuisance animals								
Damage to inlet pipe or structure Cracking and Spalling (2 bags of concrete)	4684, 4686, 4687, 46							



Dam Embankment (Includes emergency spillway if applicable) Woody vegetation on embankment	Score	Description	Comment(s) / Corrective Action(s)	Reference Image					
Shrubbery, low growing vegetation, and/or vine material growing on embankment Sparse vegetative coverage Signs of erosion, settlement, piping, or slope slippage Signs of seepage, soft spots, and sinkhole formation Under formation Under formation Under for showing signs of transh or debris on embankment Trash, debris, or obstructions in emergency spillway Outlet/Riser Structure The low-flow orifice is blocked Remove approximately 5 Cr of material from around the riser structure. BMP device is deteriorated, misaligned, and/or damaged MNP device is missing Low-level gate drain is accessible and operational. Drain has been exerched in last three years. Trash, debris, or other material in BMP device Principal Spillway Pipe Principal Spillway Pipe Spillway is blocked by debris or sediment Evidence of leaking joints One or more sections of the pipe have settled to the point that in threatens the integrity of the dam Dending area is showing signs of poor health (i.e. untrient overload, excess aquatic vegetation, or turbidity) Signs of erosion along shoreline Low-low ditch is cicaged with solutions of undercutting Sparse vegetation or crosion Outfoll structure has separated more than three inches from principal spillway barrel Outfall structure is damaged or rusting Outfall structure is damaged or rusting Woody vegetation growing within 5' of outlet structure (200 Square Feet). Overgrown vegetation adjacent to the structure (200 Square Feet).									
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1 Signs of erosion around outfall or channel	1	Buildup of trash, debris, and sediment	7-22 54333 . 554						
	1	Signs of erosion around outfall or channel							

Facility ID: STMF0090078 Inspection Date: 06/28/2023





4679: Facility Overall.



4680: Inflow Structure 1, front of the Southern end.



4681: Inside the Southern pipe of Inflow Structure 1.



4682: From Inflow 1, looking downstream.



4683: Inflow Structure 1, front of the Northern end.



4684: Inflow Structure 1, closeup of the Middle Southern pipe. Damage to inlet pipe or structure, Cracking (Routine Maintenance Needed).

Facility ID: STMF0090078
Facility Name: Oakenshaw Downstream



4685: Inside the Middle Southern pipe of Inflow Structure 1.



4686: Inflow Structure 1, closeup of the Middle Southern pipe. Damage to inlet pipe or structure, Spalling (Routine Maintenance Needed).



4687: Inflow Structure 1, closeup of the Middle Southern pipe. Damage to inlet pipe or structure, Spalling (Routine Maintenance Needed).



4688: Inflow Structure 1, closeup of the middle Northern pipe. Damage to inlet pipe or structure, Spalling (Routine Maintenance Needed).



4689: Inside the middle Northern pipe of Inflow Structure 1.



4690: Inflow Structure 1, closeup of the Middle Northern pipe. Damage to inlet pipe or structure, Spalling (Routine Maintenance Needed).



4691: Inside the Northern pipe of Inflow Structure 1.



4692: From Inflow Structure 1, looking downstream.



4693: Looking upstream along the Trickle Ditch.



4694: Looking downstream along the Trickle Ditch.

Facility ID: STMF0090078
Facility Name: Oakenshaw Downstream



4695: Facility Overall.



4696: Looking upstream along the Trickle ditch.

Facility ID: STMF0090078
Facility Name: Oakenshaw Downstream



4697: Looking downstream along the Trickle ditch.



4698: Inflow Structure 11, front.



4699: Inside Inflow Structure 11.



4700: From Inflow Structure 11, looking downstream.



4701: Facility Overall.



4702: Facility Overall.



4703: Sign, closeup.



4704: Facility Overall.



4705: Facility Overall.



4706: Control Structure 23, front.



4707: Control Structure 23, Top trash rack.



4708: Control Structure 23, closeup of the low-flow orifice. The low-flow orifice is blocked (Immediate Repair Needed).

Facility ID: STMF0090078
Facility Name: Oakenshaw Downstream



4709: Inside Control Structure 23.



4710: Inside Control Structure 23, looking upstream toward the low-flow orifice.



4711: Inside Control Structure 23, looking downstream.



4712: Inside Control Structure 23, close-up looking upstream toward the low-flow orifice.



4713: Outfall Structure 22, From dam.



4714: Outfall Structure 22, front. Overgrown vegetation adjacent to the outfall (Routine Maintenance Needed).



4715: Outfall Structure 22, closeup. Overgrown vegetation adjacent to the outfall (Routine Maintenance Needed).



4716: Inside Outfall Structure 22.



4717: From Outfall Structure 22, looking downstream.



4718: Dam Overall.



4719: Dam Overall. Signs of erosion, settlement, piping, or slope slippage (Routine Maintenance Needed).



4720: Dam Overall. Signs of erosion, settlement, piping, or slope slippage (Routine Maintenance Needed).



4721: Dam closeup. Signs of erosion, settlement, piping, or slope slippage (Routine Maintenance Needed).



NON-ROUTINE MAINTENANCE COST ESTIMATE STMF0090078 / Oakenshaw Downstream FY2023 Public BMP Inspections

Date of Inspection: 06/28/2023
Date of Estimate: 09/01/2023
Estimate Prepared by: GKY

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UI	NIT PRICE		COST
	Mowing / Clearing						
1	(includes removal & proper disposal of all woody stock,	0.10	0.1 acre	\$	74.00	\$	7.40
	brush, & trees up to 2-inch diameter)						
	Pond Control Structure/Riser Clearing (includes removal & disposal of trash, debris, floatables, &						
2	other material from directly around and on top of the	5.00	CY	\$	30.00	\$	150.00
	control structure/riser)						
	Pond Low-Flow Channel Clearing (25' Radius)						
2	(includes removal & disposal of trash, debris, floatables, &		ГА	٠	101.00	۲	
3	other material from pond channels & trash rack within 25'		EA	\$	181.00	\$	-
	radius of control structure/riser)						
4	Shoreline Clean-Up		0.1.555	٠	750.00	۲	
4	(includes removal & disposal of trash & debris from 15' of wet side and 15' of dry side of WSE)		0.1 acre	\$	750.00	\$	-
5	Trash/Debris Removal & Disposal		CY	\$	164.00	\$	_
6	Repair/Replace Facility Sign		EA	\$	247.00	\$	_
7	Repair/Replace Facility Sign and Post Installation		EA	\$	329.00	\$	-
16	Hydroseeder (400 - 600 Gallon) with Upland Seed Mix		HR	\$	217.00	\$	-
17	Hydroseeder (400 - 600 Gallon) with Wetland Seed Mix		HR	\$	411.00	\$	-
18	Hydroseeder (400 - 600 Gallon) w/ Co. Supplied Seed Mix		HR	\$	90.00	\$	-
	Pond Low-Flow Channel Clearing (per 25')						
29	(includes removal & disposal of sediment, trash, debris,		25 FT	\$	156.00	\$	_
23	floatables, & other material using handheld equipment from		2311		150.00	7	
	the pond low-flow channel)						
30	Tree Removal (2" to 6" DBH)		EA	\$	1,316.00	\$	-
31	Tree Removal (7" to 12" DBH)		EA	\$	2,961.00	\$	-
32	Tree Removal (13" to 24" DBH)		EA	\$	4,930.00	\$	-
33	Tree Removal (25" to 36" DBH)		EA	\$	6,250.00	\$	-
34	Stump Removal & Grinding (up to 12")		EA	\$	576.00	\$	-
	Excavation of Sediment						
39	(includes removal & disposal of sediment from the bottom of		CY	\$	150.00	\$	_
39	the existing pond using mechanical means; assumed		Ci	۲	130.00	۲	_
	potentially hazardous waste)						
40	Animal Burrow Repair		EA	\$	1,316.00	\$	-
53	VDOT Class I Rip-Rap with Fabric Liner		TON	\$	156.00	\$	-
54	VDOT Class II Rip-Rap with Fabric Liner		TON	\$	176.00	\$	-
58	Concrete Removal and Disposal		SF	\$	39.00	\$	-
59	Grouting Cracks and Joints		LF	\$	189.00	\$	-
62	Parging (per 50lb bag)	2.00	EA	\$	452.00	\$	904.00
70	Seed Mix	0.10	0.1 acre	\$	286.00	\$	28.60
70	(includes straw mulch and water)		0.1 acre				
79	Topsoil (3")	0.75	CY	\$	74.00	\$	55.50
N/A	Remove & Dispose of Sediment / Debris from Inside Drainage Structures and Pipes		CF	\$	30.00	\$	-
N/A	Install Grouted Class I Rip-Rap		SY	\$	90.00	\$	-
N/A	Install Grouted Class II Rip-Rap		SY	\$	141.00	\$	-
N/A	Fabricate & Install Low-Flow BMP Plate		EA	\$	500.00	\$	-
N/A	Fabricate & Install Low-Flow Trash Rack		EA	\$	500.00	\$	-
N/A	Install HR-2 Handrail		LF	\$	100.00	\$	-
N/A	Install Access Road Gate		EA	\$	2,100.00	\$	-
N/A	Install Post and Cable Barrier		EA	\$	750.00	\$	-
N/A	Install Removable Locking Bollard		EA	\$	950.00	\$	-

Sub-Total = \$ 1,145.50

Mobilization (5%) = \$ 57.28