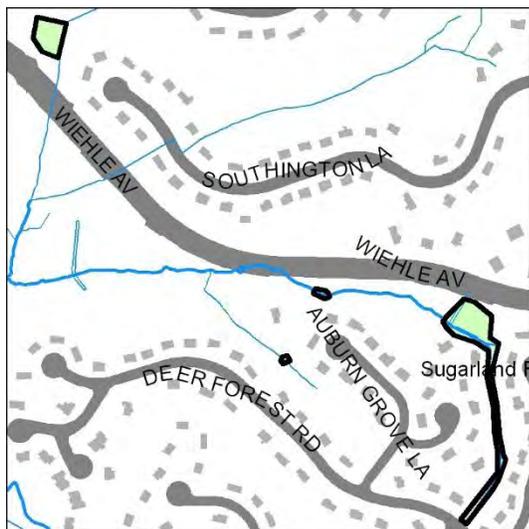
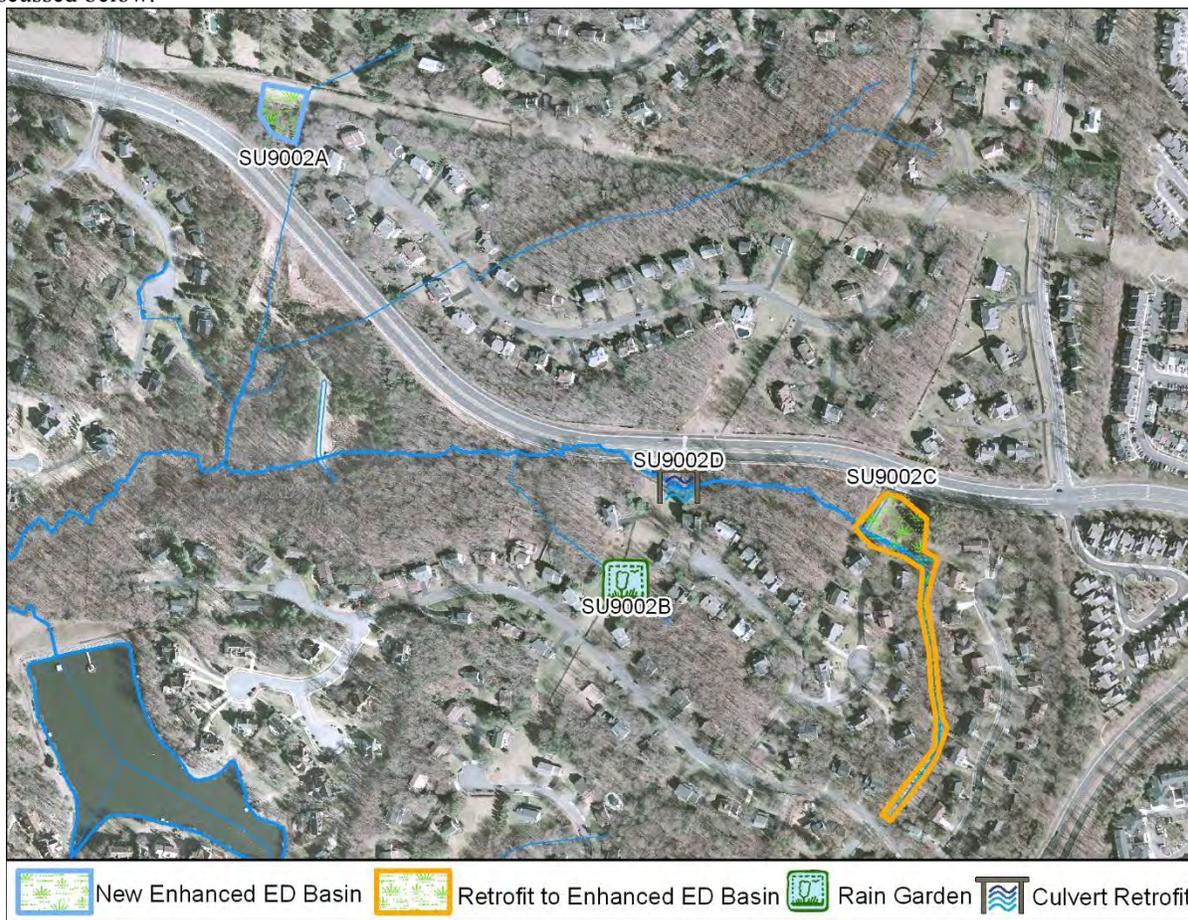


SU9002 Regional Pond Alternative Suite



Address: 11583 Southington Lane (central)
Location: Near Wheile Avenue, between Pellow Circle Terrace & Reston Avenue
Land Owner: County/Private
PIN: 0112-05-0136, 0112-05-D, 0112-05-O, 0112-06-C
Control Type: Quality/Quantity
Drainage Area: 62.8 acres
Receiving Waters: Rosiers Branch

Description: Improve existing dry pond (0337DP) to an enhanced extended detention dry basin with marsh area (SU9002C). Install new enhanced extended detention dry pond (SU9002A). Install new rain garden with educational signage (SU9002B). Repair eroded streambanks and culvert and install micro-pool (SU9002D). Larger projects are discussed below.



Project Area Map

Project Benefits: An estimated two tons/yr of total suspended solids, 51 lbs/yr of nitrogen, and 10 lbs/yr of phosphorus will be removed. This project will also generally improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat. In addition, the rain garden will reduce stormwater peak flows for small storm events, reduce stormwater runoff volumes by promoting infiltration and evapotranspiration, and provide for wildlife habitat. The project will furthermore stabilize streambanks and provide educational opportunities for the community.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Additional permitting may be required for a project within a stream or wetland. Projects in RPAs may require exceptions. 0337DP is an existing County facility located within a storm drainage easement. New stormwater pond, rain garden and stream bank erosion are located within Colonial gas easements on private land. Additional storm drainage easements will be necessary. Accessibility is excellent from Wiehle Avenue or Deer Forest Road. Tree impacts are expected. No significant construction issues are anticipated.

Overall Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Vegetated Swale	SY	1167	\$50.00	\$58,350.00
Bioretention Filters & Basin	SY	109	\$150.00	\$16,350.00
Organic Compost Soil Amendment	CY	439	\$40.00	\$17,560.00
Plantings	AC	0.93	\$25,000.00	\$23,250.00
Clear and Grub	AC	0.55	\$8,500.00	\$4,675.00
Grading and Excavation	CY	5071	\$35.00	\$177,485.00
Earthen Berm	CY	300	\$35.00	\$10,500.00
Access Road	SY	225	\$25.00	\$5,625.00
Access Road Gate	EA	1	\$2,500.00	\$2,500.00
Structural BMP and Incidentals (Low)	LS	1	\$10,000.00	\$10,000.00
New Storm Pipe (Low)	LF	65	\$100.00	\$6,500.00
Embankment	CY	400	\$50.00	\$20,000.00
Outflow Pipe	LF	20	\$125.00	\$2,500.00
RipRap Stabilization	SY	20	\$100.00	\$2,000.00
Construct New Channel	LF	50	\$200.00	\$10,000.00
Additional Cost (first 500LF)	LF	50	\$200.00	\$10,000.00
Structural BMP Retrofit and Incidentals (Med)	LS	1	\$15,000.00	\$15,000.00
			Initial Project Costs	\$392,295.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$19,614.75
<i>Erosion and Sediment Control: 10% of project costs</i>				\$39,229.50
			Base Construction Costs	\$451,139.25
			<i>Mobilization (5%)</i>	\$22,556.96
			Subtotal 1	\$473,696.21
			<i>Contingency (25%)</i>	\$118,424.05
			Subtotal 2	\$592,120.27
			<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>	\$266,454.12
			Total Costs	\$858,574.39
			Estimated Project Costs	\$860,000.00

SU9002A

Description: Construct a new enhanced extended detention dry pond in low area adjacent to gas easement to intercept storm drains from Caris Glenne subdivision.



Project Area Map

SU9002A Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	81	\$40.00	\$3,240.00
Plantings	AC	0.30	\$25,000.00	\$7,500.00
Clear and Grub	AC	0.27	\$8,500.00	\$2,295.00
Grading and Excavation	CY	1950	\$35.00	\$68,250.00
Access Road	SY	225	\$25.00	\$5,625.00
Access Road Gate	EA	1	\$2,500.00	\$2,500.00
Structural BMP and Incidentals (Low)	LS	1	\$10,000.00	\$10,000.00
New Storm Pipe (Low)	LF	65	\$100.00	\$6,500.00
Embankment	CY	200	\$50.00	\$10,000.00
Initial Project Costs				\$115,910.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$5,795.50
<i>Erosion and Sediment Control: 10% of project costs</i>				\$11,591.00
Base Construction Costs				\$133,296.50
<i>Mobilization (5%)</i>				\$6,664.83
Subtotal 1				\$139,961.33
<i>Contingency (25%)</i>				\$34,990.33
Subtotal 2				\$174,951.66
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$78,728.25
Total Costs				\$253,679.90
Estimated Project Costs				\$254,000.00

SU9002C

Description: Improve existing dry pond (0337DP) to an enhanced extended detention dry basin with marsh area. Remove concrete channels leading to basin, install vegetated swales with check dams and improve outfalls with rip rap aprons.



Project Area Map

SU9002C Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Vegetated Swale	SY	1167	\$50.00	\$58,350.00
Organic Compost Soil Amendment	CY	340	\$40.00	\$13,600.00
Plantings	AC	0.57	\$25,000.00	\$14,250.00
Clear and Grub	AC	0.24	\$8,500.00	\$2,040.00
Grading and Excavation	CY	2921	\$35.00	\$102,235.00
Embankment	CY	200	\$50.00	\$10,000.00
Outflow Pipe	LF	20	\$125.00	\$2,500.00
RipRap Stabilization	SY	20	\$100.00	\$2,000.00
Structural BMP Retrofit and Incidentals (Med)	LS	1	\$15,000.00	\$15,000.00
			Initial Project Costs	\$219,975.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$10,998.75
<i>Erosion and Sediment Control: 10% of project costs</i>				\$21,997.50
			Base Construction Costs	\$252,971.25
			<i>Mobilization (5%)</i>	\$12,648.56
			Subtotal 1	\$265,619.81
			<i>Contingency (25%)</i>	\$66,404.95
			Subtotal 2	\$332,024.77
<i>Engineering Design, Surveys, Land Acquisition, Utility</i>				
			<i>Relocation and Permits (45%)</i>	\$149,411.14
			Total Costs	\$481,435.91
			Estimated Project Costs	\$482,000.00

SU9002D

Description: Repair and stabilize eroded stream banks and culvert under walking path. Construct micro-pool upstream of culvert and include educational signage.



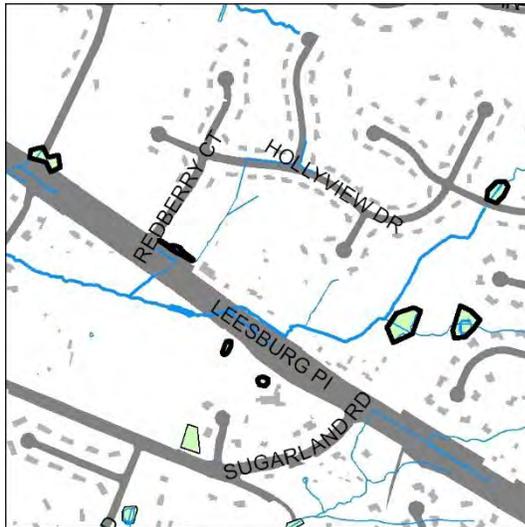
Project Area Map

SU9002D Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	9	\$40.00	\$360.00
Plantings	AC	0.04	\$25,000.00	\$1,000.00
Clear and Grub	AC	0.04	\$8,500.00	\$340.00
Grading and Excavation	CY	200	\$35.00	\$7,000.00
Earthen Berm	CY	300	\$35.00	\$10,500.00
Construct New Channel	LF	50	\$200.00	\$10,000.00
Additional Cost (first 500LF)	LF	50	\$200.00	\$10,000.00
Initial Project Costs				\$39,200.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$1,960.00
<i>Erosion and Sediment Control: 10% of project costs</i>				\$3,920.00
Base Construction Costs				\$45,080.00
<i>Mobilization (5%)</i>				\$2,254.00
Subtotal 1				\$47,334.00
<i>Contingency (25%)</i>				\$11,833.50
Subtotal 2				\$59,167.50
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$26,625.38
Total Costs				\$85,792.88
Estimated Project Costs				\$86,000.00

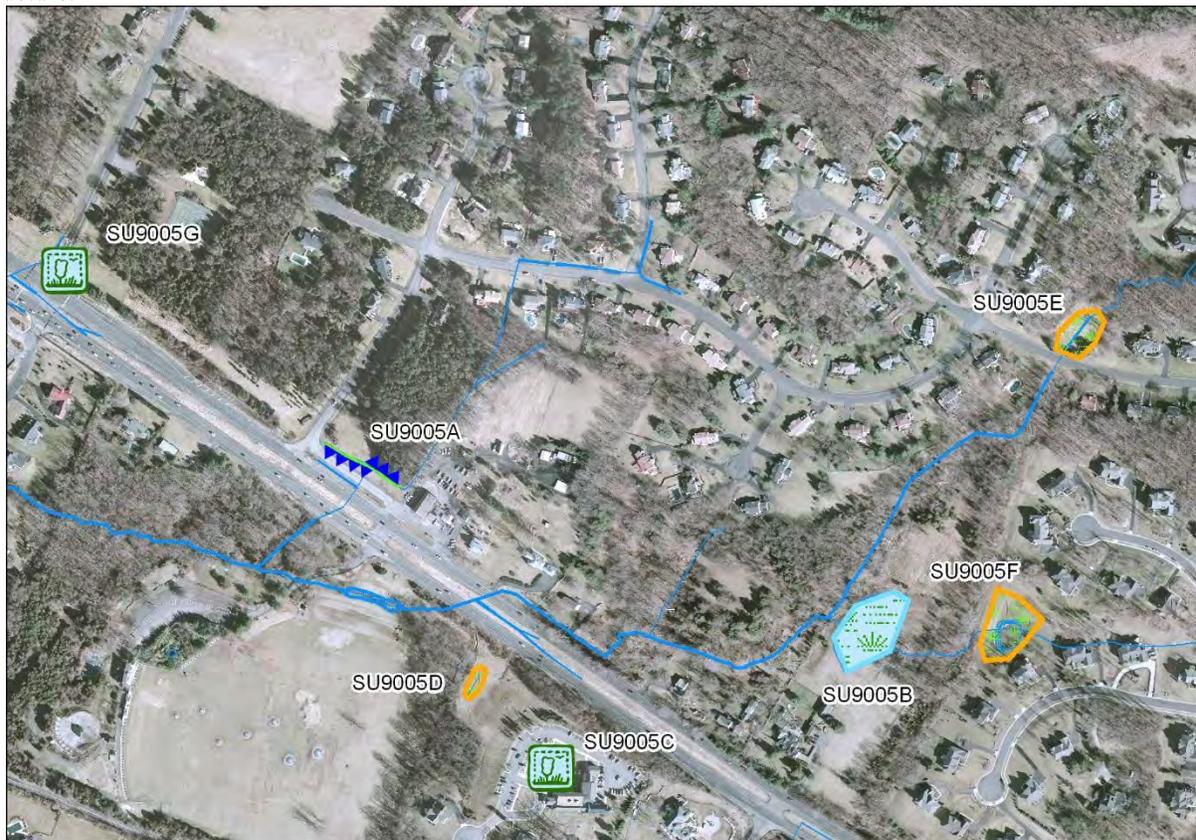
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SU9005 Stormwater Pond Retrofit



Address: 11800 Leesburg Pike
Location: Near Leesburg Pike, between Rolling Holly Drive & Sugarland Road
Land Owner: County/Private
PIN: 0063-04-I, 0063-04-J, 0063-09-D, 0064-01-0066B, 0064-01-0041, 0064-15-C, 0064-15-0018, 0064-06-B
Control Type: Quality
Drainage Area: N/A
Receiving Waters: Sugarland Run

Description: The majority of this area does not have existing stormwater controls. Install infiltration trench/vegetated swales, rain gardens, and include educational signage. Retrofit dry ponds (DP0562, 0570DP, and 1332DP) to enhanced extended detention dry basins and remove trickle ditches. Improve existing farm pond with vegetation and install outlet structure.



Project Area Map

Project Benefits: An estimated five tons/yr of total suspended solids will be removed. This project will also generally improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat. In addition, the rain garden will reduce stormwater peak flows for small storm events, reduce stormwater runoff volumes by promoting infiltration and evapotranspiration, and provide for wildlife habitat. The project will also provide educational opportunities for the community.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Additional permitting may be required for a project within a stream or wetland. Projects in RPAs may require exceptions. 0570DP and 1332DP are existing County facilities located within storm drainage easements. Infiltration trench/vegetated swale is also located within an existing storm drainage easement. DP0562 is an existing stormwater facility located on private land, farm pond retrofit and rain gardens are also located on private land. Additional storm drainage easements will be necessary. Accessibility is good from nearby roads or parking lots. Tree impacts are expected. No tree impacts or significant construction issues are anticipated.

Overall Costs

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Vegetated Swale	SY	300	\$50.00	\$15,000.00
Bioretention Filters & Basin	SY	800	\$150.00	\$120,000.00
Organic Compost Soil Amendment	CY	150	\$40.00	\$6,000.00
Plantings	AC	0.64	\$25,000.00	\$16,000.00
Clear and Grub	AC	0.30	\$8,500.00	\$2,550.00
Grading and Excavation	CY	2940	\$35.00	\$102,900.00
Structural BMP Retrofit and Incidentals (Low)	LS	4	\$10,000.00	\$40,000.00
Embankment	CY	100	\$50.00	\$5,000.00
Outflow Pipe	LF	340	\$125.00	\$42,500.00
RipRap Stabilization	SY	60	\$100.00	\$6,000.00
Initial Project Costs				\$355,950.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$17,797.50
<i>Erosion and Sediment Control: 10% of project costs</i>				\$35,595.00
Base Construction Costs				\$409,342.50
<i>Mobilization (5%)</i>				\$20,467.13
Subtotal 1				\$429,809.63
<i>Contingency (25%)</i>				\$107,452.41
Subtotal 2				\$537,262.03
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$241,767.91
Total Costs				\$779,029.95
Estimated Project Costs				\$780,000.00

SU9005C

Description: Construct new rain garden in church yard to provide water quantity control for storms up to a 10-year event and water quality treatment for church property. Install educational signage.



Project Area Map

SU9005C Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Bioretention Filters & Basin	SY	300	\$150.00	\$45,000.00
Organic Compost Soil Amendment	CY	10	\$40.00	\$400.00
Plantings	AC	0.05	\$25,000.00	\$1,250.00
			Initial Project Costs	\$46,650.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$2,332.50
<i>Erosion and Sediment Control: 10% of project costs</i>				\$4,665.00
			Base Construction Costs	\$53,647.50
			<i>Mobilization (5%)</i>	\$2,682.38
			Subtotal 1	\$56,329.88
			<i>Contingency (25%)</i>	\$14,082.47
			Subtotal 2	\$70,412.34
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$31,685.55
			Total Costs	\$102,097.90
			Estimated Project Costs	\$103,000.00

SU9005E

Description: Retrofit existing dry pond 0570DP to enhanced extended detention dry basin, remove concrete trickle ditch and naturalize basin bottom with wetland vegetation.



Project Area Map

SU9005E Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	30	\$40.00	\$1,200.00
Plantings	AC	0.15	\$25,000.00	\$3,750.00
Clear and Grub	AC	0.10	\$8,500.00	\$850.00
Grading and Excavation	CY	1000	\$35.00	\$35,000.00
Structural BMP Retrofit and Incidentals (Low)	LS	1	\$10,000.00	\$10,000.00
Embankment	CY	40	\$50.00	\$2,000.00
Outflow Pipe	LF	75	\$125.00	\$9,375.00
RipRap Stabilization	SY	20	\$100.00	\$2,000.00
Initial Project Costs				\$64,175.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$3,208.75
<i>Erosion and Sediment Control: 10% of project costs</i>				\$6,417.50
Base Construction Costs				\$73,801.25
<i>Mobilization (5%)</i>				\$3,690.06
Subtotal 1				\$77,491.31
<i>Contingency (25%)</i>				\$19,372.83
Subtotal 2				\$96,864.14
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$43,588.86
Total Costs				\$140,453.00
Estimated Project Costs				\$141,000.00

SU9005F

Description: Retrofit existing dry pond 1332DP to enhanced extended detention dry basin, remove concrete trickle ditch and naturalize basin bottom with wetland vegetation.



Project Area Map

SU9005F Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	50	\$40.00	\$2,000.00
Plantings	AC	0.26	\$25,000.00	\$6,500.00
Clear and Grub	AC	0.10	\$8,500.00	\$850.00
Grading and Excavation	CY	1500	\$35.00	\$52,500.00
Structural BMP Retrofit and Incidentals (Low)	LS	1	\$10,000.00	\$10,000.00
Embankment	CY	40	\$50.00	\$2,000.00
Outflow Pipe	LF	115	\$125.00	\$14,375.00
RipRap Stabilization	SY	30	\$100.00	\$3,000.00
			Initial Project Costs	\$91,225.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$4,561.25
<i>Erosion and Sediment Control: 10% of project costs</i>				\$9,122.50
			Base Construction Costs	\$104,908.75
			<i>Mobilization (5%)</i>	\$5,245.44
			Subtotal 1	\$110,154.19
			<i>Contingency (25%)</i>	\$27,538.55
			Subtotal 2	\$137,692.73
			<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>	\$61,961.73
			Total Costs	\$199,654.46
			Estimated Project Costs	\$200,000.00

SU9005G

Description: Construct new rain garden/bioretention filter strip above and below culvert to provide for nutrient removal and reduced storm flows for up to a 10-year storm event.

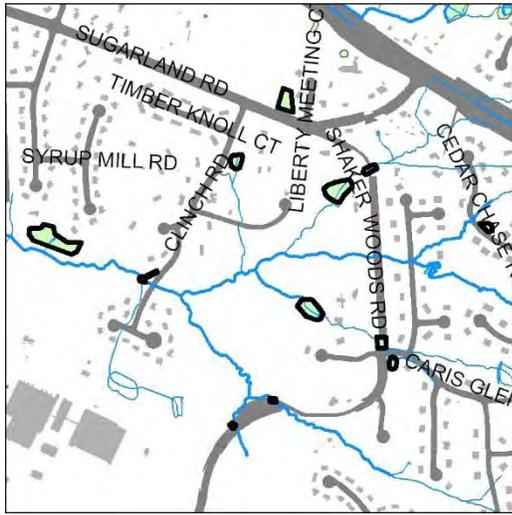


Project Area Map

SU9005G Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Bioretention Filters & Basin	SY	500	\$150.00	\$75,000.00
Organic Compost Soil Amendment	CY	10	\$40.00	\$400.00
Plantings	AC	0.02	\$25,000.00	\$500.00
			Initial Project Costs	\$75,900.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$3,795.00
<i>Erosion and Sediment Control: 10% of project costs</i>				\$7,590.00
			Base Construction Costs	\$87,285.00
			<i>Mobilization (5%)</i>	\$4,364.25
			Subtotal 1	\$91,649.25
			<i>Contingency (25%)</i>	\$22,912.31
			Subtotal 2	\$114,561.56
<i>Engineering Design, Surveys, Land Acquisition, Utility</i>				
<i>Relocation and Permits (45%)</i>				\$51,552.70
			Total Costs	\$166,114.27
			Estimated Project Costs	\$167,000.00

SU9007 Regional Pond Alternative Suite



Address:
Location: Between Leesburg Pike, Fairfax County Parkway & Wiehle Avenue
Land Owner: State/County/Park/Private
PIN: 0063-18-0001, 0064-01-0072, 0064-01-0073, 0064-14-A, 0111-09-0039, 0111-09-A, 0111-09-B, 0111-12-A, 0112-01-0001, 0112-11-A, 0112-18-D
Control Type: Quality/Quantity
Drainage Area: 281 acres
Receiving Waters: Offcuts Branch

Description: Subbasins SU-FF-0002, 0003 and 0004 have minimal stormwater controls. A combination of twelve basin retrofits, wetlands, culvert retrofits and a new basin will provide stormwater controls for nearly two-thirds of the subbasins' 457 acres. Subprojects A and H involve converting an existing non-stormwater pond to a stormwater wetland. A new stormwater wetland will be constructed for SU9007B and three existing dry basins will be retrofitted to extended detention basins for subprojects I, K and L. Larger projects are discussed below.



Project Area Map

Project Benefits: This project will improve water quality in downstream waterbodies by removing an estimated nine tons/yr of total suspended solids, 77 lbs/yr of nitrogen, and 16 lbs/yr of phosphorus. This project will also reduce peak stormwater flows for storms up to a 10-year event and provide for evapotranspiration and wildlife habitat. Culvert retrofits will reduce local roadway flooding.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Additional permitting may be required for a project within a stream or wetland. Projects in RPAs may require exceptions. A new constructed wetland and farm pond retrofit are located within existing County storm drainage easements. Two farm pond retrofits, a new stormwater basin, and two existing dry pond retrofits are located on private land. A third existing dry pond retrofit is located on County park land, and four culvert retrofits are located within VDOT rights-of-way. Additional storm drainage easements will be necessary. Accessibility is ranges from excellent to difficult. Tree impacts are expected. No significant construction issues are anticipated.

Overall Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Vegetated Swale	SY	190	\$50.00	\$9,500.00
Bioretention Filters & Basin	SY	70	\$150.00	\$10,500.00
Organic Compost Soil Amendment	CY	350	\$40.00	\$14,000.00
Plantings	AC	0.85	\$25,000.00	\$21,250.00
Clear and Grub	AC	0.74	\$8,500.00	\$6,290.00
Grading and Excavation	CY	3020	\$35.00	\$105,700.00
Earthen Berm	CY	10	\$35.00	\$350.00
Access Road	SY	405	\$25.00	\$10,125.00
Access Road Gate	EA	2	\$2,500.00	\$5,000.00
Structural BMP and Incidentals (Low)	LS	6	\$10,000.00	\$60,000.00
New Storm Pipe (Low)	LF	180	\$100.00	\$18,000.00
Embankment	CY	250	\$50.00	\$12,500.00
Outflow Pipe	LF	140	\$125.00	\$17,500.00
RipRap Stabilization	SY	200	\$100.00	\$20,000.00
Structural BMP Retrofit and Incidentals (Low)	LS	2	\$10,000.00	\$20,000.00
			Initial Project Costs	\$330,715.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$16,535.75
<i>Erosion and Sediment Control: 10% of project costs</i>				\$33,071.50
			Base Construction Costs	\$380,322.25
			<i>Mobilization (5%)</i>	\$19,016.11
			Subtotal 1	\$399,338.36
			<i>Contingency (25%)</i>	\$99,834.59
			Subtotal 2	\$499,172.95
			<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>	\$224,627.83
			Total Costs	\$723,800.78
			Estimated Project Costs	\$730,000.00

SU9007C

Description: Install new in-line constructed wetland near nature trail. Replace gravel bed with vegetated swale to direct runoff towards new constructed wetlands. Educate adjacent homeowners regarding best practices and appropriate stormwater management.



Project Area Map

SU9007C Costs:

Item	Units	Quantity	Unit Cost	Total
Vegetated Swale	SY	80	\$50.00	\$4,000.00
Bioretention Filters & Basin	SY	70	\$150.00	\$10,500.00
Organic Compost Soil Amendment	CY	113	\$40.00	\$4,520.00
Plantings	AC	0.28	\$25,000.00	\$7,000.00
Clear and Grub	AC	0.02	\$8,500.00	\$170.00
Grading and Excavation	CY	1245	\$35.00	\$43,575.00
Access Road	SY	180	\$25.00	\$4,500.00
Access Road Gate	EA	1	\$2,500.00	\$2,500.00
Structural BMP and Incidentals (Low)	LS	1	\$10,000.00	\$10,000.00
New Storm Pipe (Low)	LF	25	\$100.00	\$2,500.00
Embankment	CY	40	\$50.00	\$2,000.00
Initial Project Costs				\$91,265.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$4,563.25
<i>Erosion and Sediment Control: 10% of project costs</i>				\$9,126.50
Base Construction Costs				\$104,954.75
<i>Mobilization (5%)</i>				\$5,247.74
Subtotal 1				\$110,202.49
<i>Contingency (25%)</i>				\$27,550.62
Subtotal 2				\$137,753.11
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$61,988.90
Total Costs				\$199,742.01
Estimated Project Costs				\$200,000.00

SU9007D

Description: Construct new extended detention dry basin in low area to intercept storm drains.



Project Area Map

SU9007D Costs:

Item	Units	Quantity	Unit Cost	Total
Organic Compost Soil Amendment	CY	40	\$40.00	\$1,600.00
Plantings	AC	0.10	\$25,000.00	\$2,500.00
Clear and Grub	AC	0.05	\$8,500.00	\$425.00
Grading and Excavation	CY	390	\$35.00	\$13,650.00
Access Road	SY	225	\$25.00	\$5,625.00
Access Road Gate	EA	1	\$2,500.00	\$2,500.00
Structural BMP and Incidentals (Low)	LS	1	\$10,000.00	\$10,000.00
New Storm Pipe (Low)	LF	30	\$100.00	\$3,000.00
Embankment	CY	25	\$50.00	\$1,250.00
Initial Project Costs				\$40,550.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$2,027.50
<i>Erosion and Sediment Control: 10% of project costs</i>				\$4,055.00
Base Construction Costs				\$46,632.50
<i>Mobilization (5%)</i>				<i>\$2,331.63</i>
Subtotal 1				\$48,964.13
<i>Contingency (25%)</i>				<i>\$12,241.03</i>
Subtotal 2				\$61,205.16
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				<i>\$27,542.32</i>
Total Costs				\$88,747.48
Estimated Project Costs				\$89,000.00

SU9007E

Description: Roadway culvert is undersized and filling with sediment. Remove sediment blocking culvert, replace culvert with adequately sized culvert, and raise road bed as necessary. Construct micro-pool with wetland vegetation upstream of culvert to settle sediment loads and prevent clogging of culverts.



Project Area Map

SU9007E Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	40	\$40.00	\$1,600.00
Plantings	AC	0.10	\$25,000.00	\$2,500.00
Clear and Grub	AC	0.05	\$8,500.00	\$425.00
Grading and Excavation	CY	410	\$35.00	\$14,350.00
Access Road	SY	400	\$25.00	\$10,000.00
New Storm Pipe (Low)	LF	40	\$100.00	\$4,000.00
Embankment	CY	110	\$50.00	\$5,500.00
Earthen Berm	CY	5	\$35.00	\$175.00
RipRap Stabilization	SY	65	\$100.00	\$6,500.00
			Initial Project Costs	\$45,050.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$2,252.50
<i>Erosion and Sediment Control: 10% of project costs</i>				\$4,505
			Base Construction Costs	\$51,807.50
			<i>Mobilization (5%)</i>	\$2,590.38
			Subtotal 1	\$54,397.88
			<i>Contingency (25%)</i>	\$13,599.47
			Subtotal 2	\$67,997.34
			<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>	\$30,598.80
			Total Costs	\$98,596.15
			Estimated Project Costs	\$99,000.00

SU9007F

Description: Roadway culvert is undersized and has been damaged by debris from large flows. Replace damaged culvert with appropriately sized culvert and raise road bed. Construct a plunge pool and plant with wetland vegetation downstream of culvert.



 Culvert Retrofit

Project Area Map

SU9007F Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	20	\$40.00	\$800.00
Plantings	AC	0.05	\$25,000.00	\$1,250.00
Clear and Grub	AC	0.05	\$8,500.00	\$425.00
Grading and Excavation	CY	410	\$35.00	\$14,350.00
Access Road	SY	400	\$25.00	\$10,000.00
New Storm Pipe (Low)	LF	40	\$100.00	\$4,000.00
Embankment	CY	110	\$50.00	\$5,500.00
Earthen Berm	CY	3	\$35.00	\$105.00
RipRap Stabilization	SY	65	\$100.00	\$6,500.00
Initial Project Costs				\$42,930.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$2,146.50
<i>Erosion and Sediment Control: 10% of project costs</i>				\$4,293.00
Base Construction Costs				\$49,369.50
<i>Mobilization (5%)</i>				\$2,468.48
Subtotal 1				\$51,837.98
<i>Contingency (25%)</i>				\$12,959.49
Subtotal 2				\$64,797.47
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$29,158.86
Total Costs				\$93,956.33
Estimated Project Costs				\$94,000.00

SU9007G

Description: Roadway culvert is undersized and filling with sediment. Remove sediment blocking culvert and stabilize eroded stream banks. Replace culvert with adequately sized culvert, and raise road bed as necessary.



Project Area Map

SU9007G Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	20	\$40.00	\$800.00
Plantings	AC	0.05	\$25,000.00	\$1,250.00
Clear and Grub	AC	0.05	\$8,500.00	\$425.00
Grading and Excavation	CY	370	\$35.00	\$12,950.00
Access Road	SY	400	\$25.00	\$10,000.00
New Storm Pipe (Low)	LF	40	\$100.00	\$4,000.00
Embankment	CY	110	\$50.00	\$5,500.00
Earthen Berm	CY	3	\$35.00	\$105.00
RipRap Stabilization	SY	65	\$100.00	\$6,500.00
			Initial Project Costs	\$41,530.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$2,076.50
<i>Erosion and Sediment Control: 10% of project costs</i>				\$4,153.00
			Base Construction Costs	\$47,759.50
			<i>Mobilization (5%)</i>	\$2,387.98
			Subtotal 1	\$50,147.48
			<i>Contingency (25%)</i>	\$12,536.87
			Subtotal 2	\$62,684.34
			<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>	\$28,207.95
			Total Costs	\$90,892.30
			Estimated Project Costs	\$91,000.00

SU9007K

Description: Improve dry pond 0727DP to extended detention dry basin. Raise elevation of embankments and retrofit outlet structure for additional storage capacity. Naturalize basin bottom with wetland plantings.

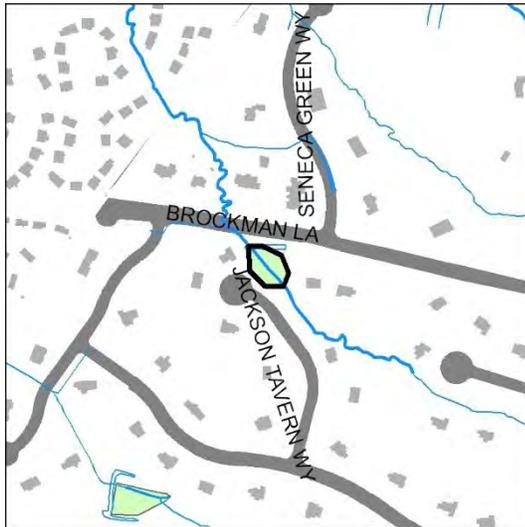


Project Area Map

SU9007K Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	20	\$40.00	\$1,600.00
Plantings	AC	0.10	\$25,000.00	\$2,500.00
Clear and Grub	AC	0.10	\$8,500.00	\$850.00
Grading and Excavation	CY	370	\$35.00	\$12,950.00
Access Road	SY	400	\$25.00	\$10,000.00
New Storm Pipe (Low)	LF	50	\$100.00	\$5,000.00
Embankment	CY	120	\$50.00	\$6,000.00
RipRap Stabilization	SY	75	\$100.00	\$7,500.00
			Initial Project Costs	\$46,400.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$2,320.00
<i>Erosion and Sediment Control: 10% of project costs</i>				\$4,640.00
			Base Construction Costs	\$53,360.00
			<i>Mobilization (5%)</i>	\$2,668.00
			Subtotal 1	\$56,028.00
			<i>Contingency (25%)</i>	\$14,007.00
			Subtotal 2	\$70,035.00
			<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>	\$31,515.75
			Total Costs	\$101,550.75
			Estimated Project Costs	\$102,000.00

SU9100 Stormwater Pond Retrofit



Address:	501 Jackson Tavern Way
Location:	Jackson Tavern Way cul-de-sac
Land Owner:	County
PIN:	0024-09-0025A
Control Type	Quality/Quantity
Drainage Area	53 acres
Receiving Waters	Sugarland Run

Description: The Great Falls West basin provides only water quantity control. Retrofit existing dry pond (1445DP) to enhanced extended detention dry basin with marsh areas, including installation of proper outlet structure and clearing of blocked culvert pipe.



Retrofit to Enhanced ED Basin

Project Area Map

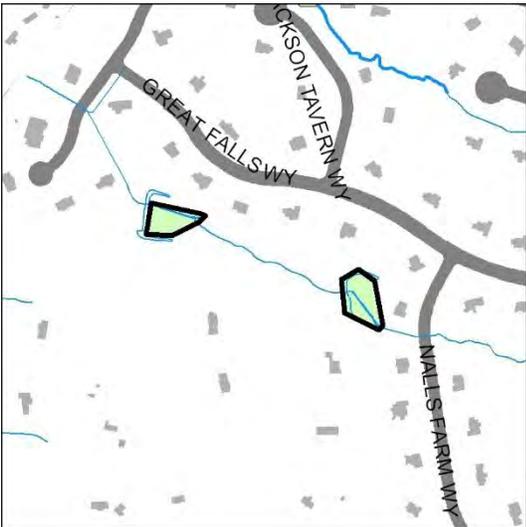
Project Benefits: An estimated one ton/yr of total suspended solids, 33 lbs/yr of nitrogen, and six lbs/yr of phosphorus will be removed. This project will also generally improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Projects in RPAs may require exceptions. This is an existing County facility located within a storm drainage easement on private land. Accessibility is excellent from Jackson Tavern Lane. No tree impacts or significant construction issues are anticipated.

Costs:

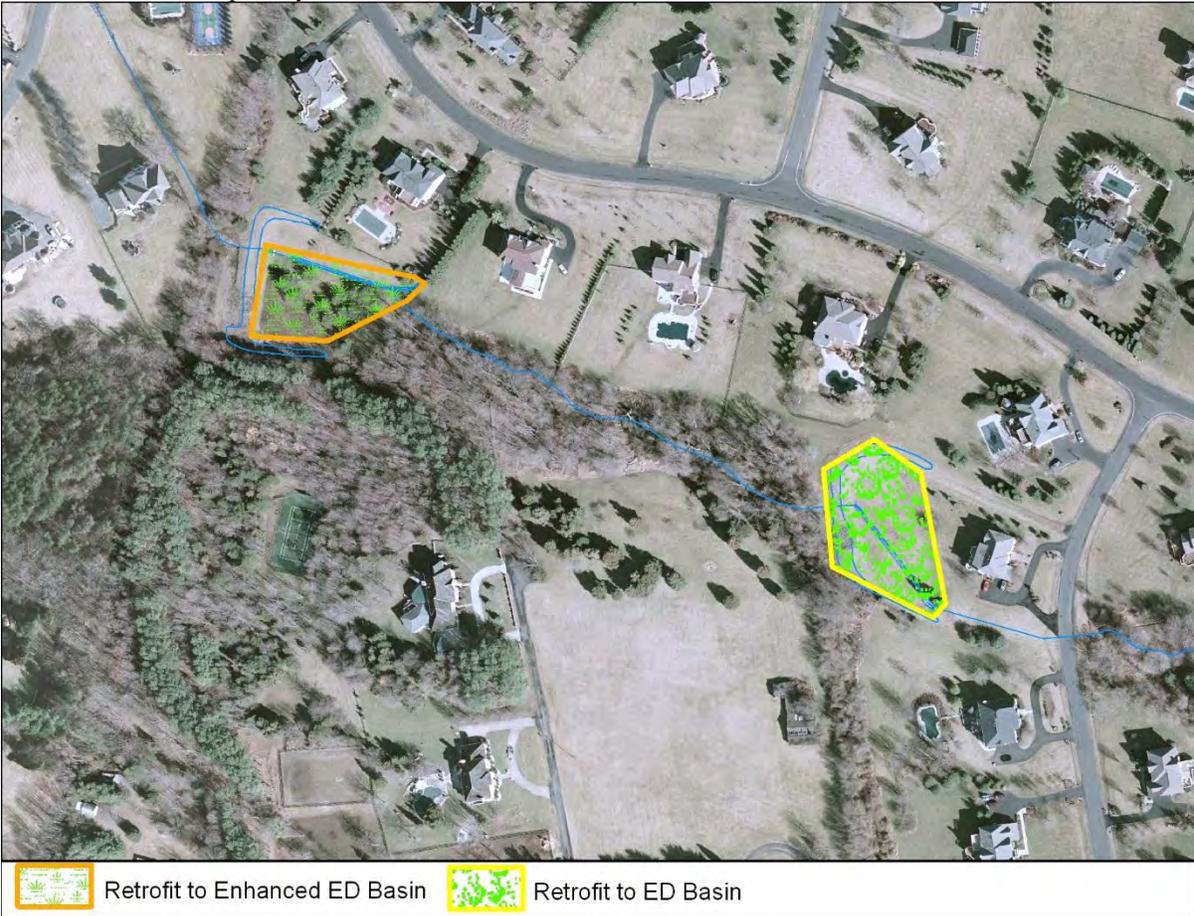
<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	109	\$40.00	\$4,360.00
Plantings	AC	0.27	\$25,000.00	\$6,750.00
Clear and Grub	AC	0.17	\$8,500.00	\$1,445.00
Grading and Excavation	CY	1305	\$35.00	\$45,675.00
Embankment	CY	15	\$50.00	\$750.00
Outflow Pipe	LF	30	\$125.00	\$3,750.00
RipRap Stabilization	SY	11	\$100.00	\$1,100.00
Structural BMP Retrofit and Incidentals (Low)	LS	1	\$10,000.00	\$10,000.00
Initial Project Costs				\$73,830.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$3,691.50
<i>Erosion and Sediment Control: 10% of project costs</i>				\$7,383.00
Base Construction Costs				\$84,904.50
<i>Mobilization (5%)</i>				\$4,245.23
Subtotal 1				\$89,149.73
<i>Contingency (25%)</i>				\$22,287.43
Subtotal 2				\$111,437.16
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$50,146.72
Total Costs				\$161,583.88
Estimated Project Costs				\$170,000.00

SU9101 Stormwater Pond Retrofit



Address: 11639 Great Falls Way
Location: Near Great Falls Way & Jackson Tavern Way
Land Owner: County/Private
PIN: 0024-09-0032, 0024-09-0033, 0024-09-0038
Control Type: Quality/Quantity
Drainage Area: 50 acres
Receiving Waters: Sugarland Run

Description: The Great Falls West basins provide only water quantity control. Retrofit existing dry ponds (1447DP and 1446DP) to enhanced extended detention dry basin with marsh areas, remove trickle ditches, install proper outlet structures and increase spillway elevation.



 Retrofit to Enhanced ED Basin
  Retrofit to ED Basin

Project Area Map

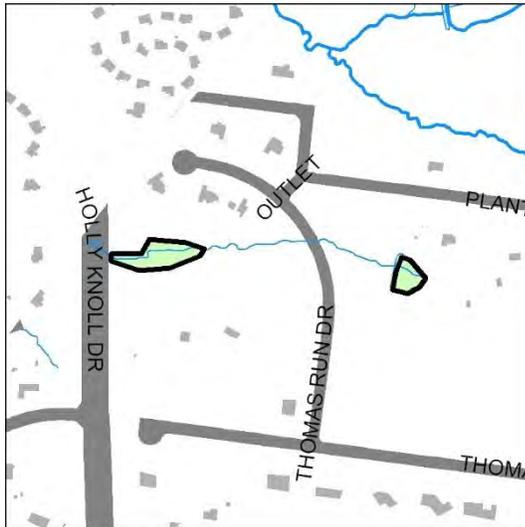
Project Benefits: This project will reduce sediment and nutrient loadings pollutions, improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. 1446DP is an existing County facility located within a storm drainage easement on private land. 1447DP is an existing stormwater facility located on private land, a drainage easement will be necessary for 1447DP, which is located near an access easement. Accessibility may be difficult, and access easements may be required as they are located on private residential properties. No tree impacts or significant construction issues are anticipated.

Costs:

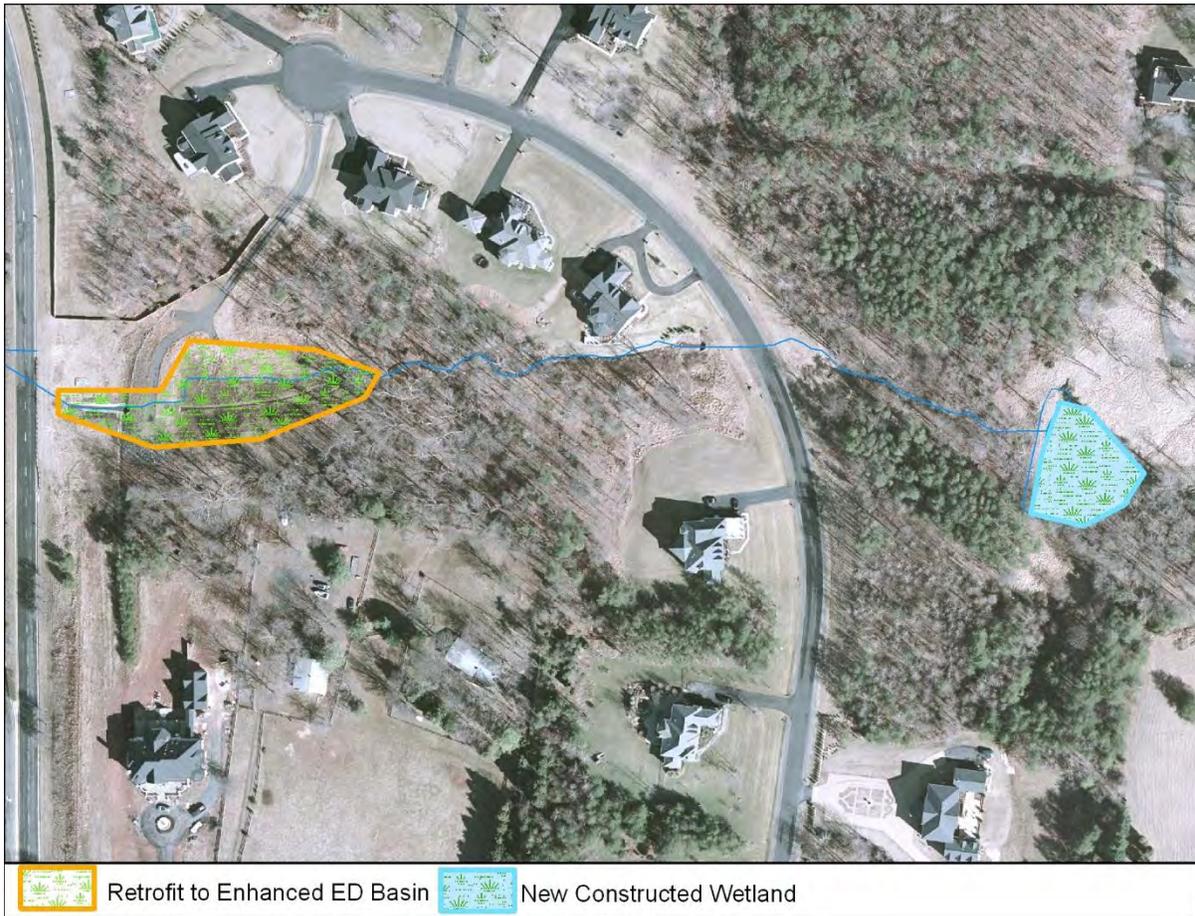
<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	269	\$40.00	\$10,760.00
Plantings	AC	0.66	\$25,000.00	\$16,500.00
Clear and Grub	AC	0.43	\$8,500.00	\$3,655.00
Grading and Excavation	CY	3222	\$35.00	\$112,770.00
Embankment	CY	20	\$50.00	\$1,000.00
Outflow Pipe	LF	40	\$125.00	\$5,000.00
RipRap Stabilization	SY	15	\$100.00	\$1,500.00
Structural BMP Retrofit and Incidentals (Low)	LS	1	\$10,000.00	\$10,000.00
Structural BMP Retrofit and Incidentals (Med)	LS	1	\$15,000.00	\$15,000.00
Initial Project Costs				\$176,185.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$8,809.25
<i>Erosion and Sediment Control: 10% of project costs</i>				\$17,618.50
Base Construction Costs				\$202,612.75
<i>Mobilization (5%)</i>				\$10,130.64
Subtotal 1				\$212,743.39
<i>Contingency (25%)</i>				\$53,185.85
Subtotal 2				\$265,929.23
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$119,668.16
Total Costs				\$385,597.39
Estimated Project Costs				\$390,000.00

SU9103 Stormwater Pond Retrofit



Address:	812 Thomas Run Drive
Location:	Thomas Run Drive
Land Owner:	County/Private
PIN:	0061-01-0012A, 0061-10-A
Control Type	Quality/Quantity
Drainage Area	73 acres
Receiving Waters	Sugarland Run

Description: Kentland Farms and Thomas Avenue have few stormwater controls. Retrofit existing dry pond to an enhanced extended detention dry basin with marsh areas and micro-pool, remove trickle ditch. Drain near-by farm pond to create a new constructed wetland.



 Retrofit to Enhanced ED Basin
  New Constructed Wetland

Project Area Map

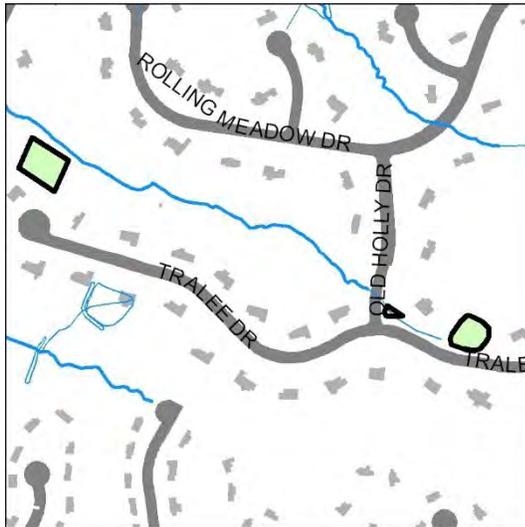
Project Benefits: An estimated two tons/yr of total suspended solids, 71 lbs/yr of nitrogen, and 14 lbs/yr of phosphorus will be removed. This project will also generally improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Additional permitting may be required for a project within a stream or wetland. The existing dry pond is located within a storm drainage easement, restrictive planting easement, and Fairfax water easement, and is adjacent to an access easement. A storm drainage easement will be necessary for the constructed wetland. Accessibility is excellent via the access easement from Thomas Run Drive and the private driveway from Plantation Drive. No tree impacts or significant construction issues are anticipated.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	297	\$40.00	\$11,880.00
Plantings	AC	0.74	\$25,000.00	\$18,500.00
Clear and Grub	AC	0.05	\$8,500.00	\$425.00
Grading and Excavation	CY	1281	\$35.00	\$44,835.00
Embankment	CY	15	\$50.00	\$750.00
Outflow Pipe	LF	20	\$125.00	\$2,500.00
RipRap Stabilization	SY	8	\$100.00	\$800.00
Structural BMP Retrofit and Incidentals (Med)	LS	1	\$15,000.00	\$15,000.00
			Initial Project Costs	\$94,690.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$4,734.50
<i>Erosion and Sediment Control: 10% of project costs</i>				\$9,469.00
			Base Construction Costs	\$108,893.50
			<i>Mobilization (5%)</i>	\$5,444.68
			Subtotal 1	\$114,338.18
			<i>Contingency (25%)</i>	\$28,584.54
			Subtotal 2	\$142,922.72
			<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>	\$64,315.22
			Total Costs	\$207,237.94
			Estimated Project Costs	\$210,000.00

SU9106 Stormwater Pond Retrofit, BMP/LID



Address: 11558 and 11538 Tralee Drive
Location: Near Tralee Drive & Old Holly Drive
Land Owner: Private
PIN: 0064-13-0006, 0064-13020020, 0064-1302-A1, 0064-13-A2
Control Type: Quality/Quantity
Drainage Area: 33
Receiving Waters: Sugarland Run

Description: Retrofit existing dry ponds (1382DP and 1454DP) to extended detention dry basins for improved quality and quantity control. Remove trickle ditches, retrofit outlet structures, and naturalize. Install a rain garden around an existing inlet.



Project Area Map

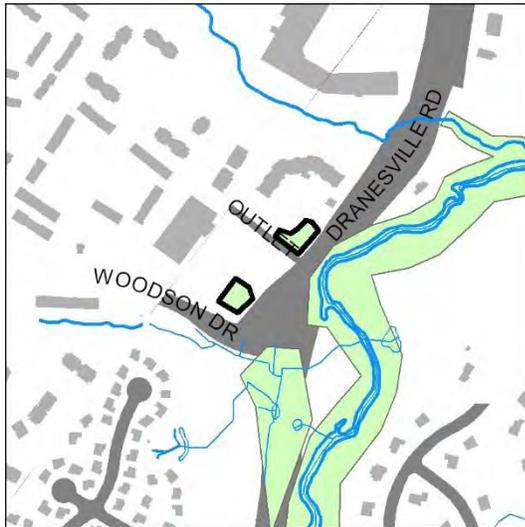
Project Benefits: This project will reduce sediment and nutrient loadings to downstream waterbodies, improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat. The rain garden will reduce stormwater peak flows for small storm events, reduce stormwater runoff volumes by promoting infiltration, and provide for evapotranspiration and wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Projects in RPAs may require exceptions. These basins are existing stormwater facilities located on private land. Storm drainage easements will be necessary. Accessibility is excellent from Tralee Drive. No tree impacts or significant construction issues are anticipated.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Bioretention Filters & Basin	SY	222	\$150.00	\$33,300.00
Organic Compost Soil Amendment	CY	237	\$40.00	\$9,480.00
Plantings	AC	0.86	\$25,000.00	\$21,500.00
Clear and Grub	AC	0.05	\$8,500.00	\$425.00
Grading and Excavation	CY	2622	\$35.00	\$91,770.00
Embankment	CY	20	\$50.00	\$1,000.00
Outflow Pipe	LF	30	\$125.00	\$3,750.00
RipRap Stabilization	SY	15	\$100.00	\$1,500.00
Structural BMP Retrofit and Incidentals (Low)	LS	2	\$10,000.00	\$20,000.00
			Initial Project Costs	\$182,725.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$9,136.25
<i>Erosion and Sediment Control: 10% of project costs</i>				\$18,272.50
			Base Construction Costs	\$210,133.75
			<i>Mobilization (5%)</i>	\$10,506.69
			Subtotal 1	\$220,640.44
			<i>Contingency (25%)</i>	\$55,160.11
			Subtotal 2	\$275,800.55
			<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>	\$124,110.25
			Total Costs	\$399,910.79
			Estimated Project Costs	\$400,000.00

SU9108 Stormwater Pond Retrofit



Address: 1100 and 1108 Dranesville Road
Location: Dranesville Road & Woodson Drive
Land Owner: Private
PIN: 0063-01-0011, 0063-01-0011A
Control Type: Quality/Quantity
Drainage Area: 6 acres
Receiving Waters: Sugarland Run

Description: Retrofit Bowl America dry pond to extended detention dry basin and Sugarland Hill dry pond (0570DP) to enhanced extended detention dry basin with marsh areas for improved quality and quantity controls. Install educational signage.



Project Area Map

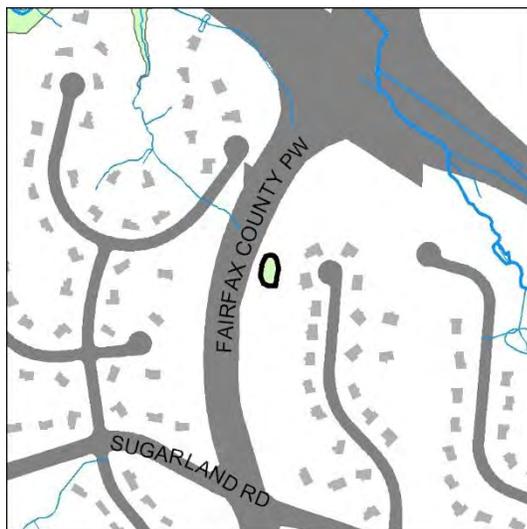
Project Benefits: This project will reduce sediment and nutrient loadings to downstream waterbodies, improve water quality, reduce peak stormwater flows for storms up to a 10- year event, and provide for evapotranspiration and wildlife habitat. By adding educational signs, the general public will be provided with important information on how the basins are protecting water quality in the County.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Additional permitting may be required for a project within a stream or wetland. SU9108B is an existing stormwater facility located on private land, and is partially located on an access easement. Storm drainage easements will be necessary. Accessibility is excellent from Dranesville Road and adjacent parking lots. No tree impacts or significant construction issues are anticipated.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	120	\$40.00	\$4,800.00
Plantings	AC	0.45	\$25,000.00	\$11,250.00
Clear and Grub	AC	0.15	\$8,500.00	\$1,275.00
Grading and Excavation	CY	1439	\$35.00	\$50,365.00
Embankment	CY	20	\$50.00	\$1,000.00
Outflow Pipe	LF	40	\$125.00	\$5,000.00
RipRap Stabilization	SY	15	\$100.00	\$1,500.00
Structural BMP Retrofit and Incidentals (Low)	LS	2	\$10,000.00	\$20,000.00
			Initial Project Costs	\$95,190.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$4,759.50
<i>Erosion and Sediment Control: 10% of project costs</i>				\$9,519.00
			Base Construction Costs	\$109,468.50
			<i>Mobilization (5%)</i>	\$5,473.43
			Subtotal 1	\$114,941.93
			<i>Contingency (25%)</i>	\$28,735.48
			Subtotal 2	\$143,677.41
			<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>	\$64,654.83
			Total Costs	\$208,332.24
			Estimated Project Costs	\$210,000.00

SU9110 Stormwater Pond Retrofit



Address:	1062 Methven Court
Location:	Methven Court cul-de-sac
Land Owner:	County
PIN:	0063-14-A
Control Type	Quality/Quantity
Drainage Area	8 acres
Receiving Waters	Sugarland Run

Description: Existing dry pond in Laing at Sugarland subdivision will be enlarged and retrofitted to extended detention basin to provide additional quantity and quality control. Remove concrete trickle ditch and install proper outlet structure.



Retrofit to ED Basin

Project Area Map

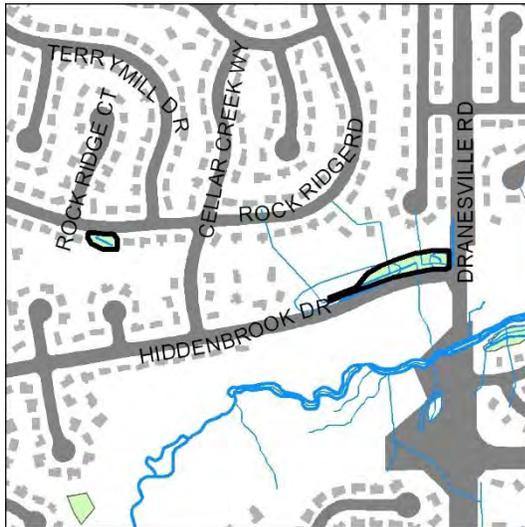
Project Benefits: This project will reduce sediment and nutrient loadings to downstream waterbodies, improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat. Removal of the trickle ditch will slow stormwater runoff velocities, and a new outlet structure will allow for a more controlled rate of discharge from the basin.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Additional permitting may be required for a project within a stream or wetland. This dry pond is an existing County facility located within a storm drainage easement on private land. Accessibility is excellent via the storm drainage easement Methven Court. Tree impacts are expected. No significant construction issues are anticipated.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	40	\$40.00	\$1,600.00
Plantings	AC	0.15	\$25,000.00	\$3,750.00
Clear and Grub	AC	0.05	\$8,500.00	\$425.00
Grading and Excavation	CY	944	\$35.00	\$33,040.00
Embankment	CY	100	\$50.00	\$5,000.00
Outflow Pipe	LF	20	\$125.00	\$2,500.00
RipRap Stabilization	SY	8	\$100.00	\$800.00
Structural BMP Retrofit and Incidentals (Low)	LS	1	\$10,000.00	\$10,000.00
			Initial Project Costs	\$57,115.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$2,855.75
<i>Erosion and Sediment Control: 10% of project costs</i>				\$5,711.50
			Base Construction Costs	\$65,682.25
			<i>Mobilization (5%)</i>	\$3,284.11
			Subtotal 1	\$68,966.36
			<i>Contingency (25%)</i>	\$17,241.59
			Subtotal 2	\$86,207.95
			<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>	\$38,793.58
			Total Costs	\$125,001.53
			Estimated Project Costs	\$130,000.00

SU9117 Stormwater Pond Retrofit



Address: 12537 Misty Water Drive &
 12573 Rock Ridge Road

Location: Dranesville Road & Hiddenbrook Drive

Land Owner: County/Private

PIN: 0102-14-B, 0102-14-H

Control Type: Quality/Quantity

Drainage Area: 73 acres

Receiving Waters: Folly Lick Branch

Description: Retrofit existing dry pond (0827DP) to extended detention dry basin and adjacent, existing dry ponds (0637DP and 0934DP) to a single enhanced extended detention dry basin with marsh areas. Remove trickle ditches, install forebay and install/retrofit outlet structure.



 Retrofit to ED Basin  Retrofit to Enhanced ED Basin

Project Area Map

Project Benefits: This project will improve water quality in downstream waterbodies by removing an estimated five tons/yr of total suspended solids, 68 lbs/yr of nitrogen, and 13 lbs/yr of phosphorus. The retrofitted basin will reduce peak stormwater flows for storms up to a 10-year event and provide for evapotranspiration and wildlife habitat. Removal of the trickle ditch will slow stormwater velocities, and the installation of the forebay will enhance sediment deposition at the inlet of the basin.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Additional permitting may be required for a project within a stream or wetland. These basins are existing County facilities. 0934DP and 0827DP are located on storm drainage easements. The storm drainage easement for 0934DP will need to be expanded to include 0637DP. They are all located adjacent to a Colonial Gas easement. Accessibility is excellent from Hiddenbrook Drive, Rock Ridge Road, or the gas easement. Tree impacts are expected. No significant construction issues are anticipated.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	446	\$40.00	\$17,840.00
Plantings	AC	1.07	\$25,000.00	\$26,750.00
Clear and Grub	AC	0.81	\$8,500.00	\$6,885.00
Grading and Excavation	CY	3820	\$35.00	\$133,700.00
Embankment	CY	45	\$50.00	\$2,250.00
Outflow Pipe	LF	50	\$125.00	\$6,250.00
RipRap Stabilization	SY	22	\$100.00	\$2,200.00
Structural BMP and Incidentals (Med)	LS	2	\$15,000.00	\$30,000.00
Initial Project Costs				\$225,875.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$11,293.75
<i>Erosion and Sediment Control: 10% of project costs</i>				\$22,587.50
Base Construction Costs				\$259,756.25
<i>Mobilization (5%)</i>				\$12,987.81
Subtotal 1				\$272,744.06
<i>Contingency (25%)</i>				\$68,186.02
Subtotal 2				\$340,930.08
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$153,418.54
Total Costs				\$494,348.61
Estimated Project Costs				\$500,000.00

SU9123 Stormwater Pond Retrofit



Address: 12538 Philmont Drive
Location: Near Philmont Drive & Judd Court
Land Owner: Private
PIN: 0102-16-C4
Control Type: Quality/Quantity
Drainage Area: 60 acres
Receiving Waters: Folly Lick Branch

Description: Improve existing regional dry pond S-04 (1440DP) to enhanced extended detention dry basin with marsh areas. Remove concrete trickle ditch and retrofit outlet structure.



Retrofit to Enhanced ED Basin

Project Area Map

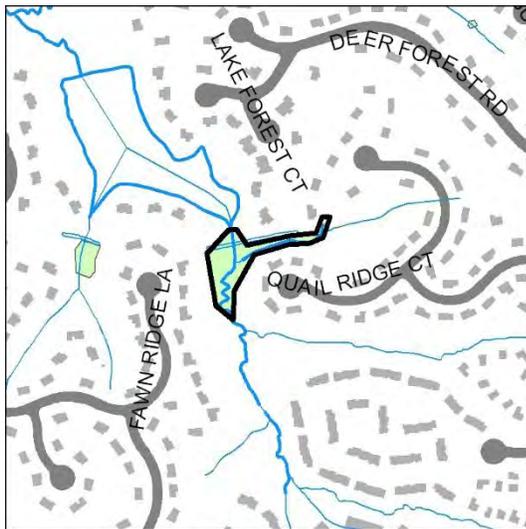
Project Benefits: An estimated one ton/yr of total suspended solids, 75 lbs/yr of nitrogen, and 10 lbs/yr of phosphorus will be removed. This project will also generally improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Projects in RPAs may require exceptions. This is an existing stormwater facility located on private land. A storm drainage easement will be necessary. Accessibility is excellent from Philmont Drive. No tree impacts or significant construction issues are anticipated.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	158	\$40.00	\$6,320.00
Plantings	AC	0.79	\$25,000.00	\$19,750.00
Grading and Excavation	CY	2535	\$35.00	\$88,725.00
Embankment	CY	200	\$50.00	\$10,000.00
Outflow Pipe	LF	20	\$125.00	\$2,500.00
RipRap Stabilization	SY	11	\$100.00	\$1,100.00
Structural BMP Retrofit and Incidentals (Low)	LS	1	\$10,000.00	\$10,000.00
Initial Project Costs				\$138,395.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$6,919.75
<i>Erosion and Sediment Control: 10% of project costs</i>				\$13,839.50
Base Construction Costs				\$159,154.25
<i>Mobilization (5%)</i>				\$7,957.71
Subtotal 1				\$167,111.96
<i>Contingency (25%)</i>				\$41,777.99
Subtotal 2				\$208,889.95
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$94,000.48
Total Costs				\$302,890.43
Estimated Project Costs				\$310,000.00

SU9129 Stormwater Pond Retrofit



Address: 11600 Quail Ridge Court
Location: Near Quail Ridge Court cul-de-sac
Land Owner: Private
PIN: 0113-01-0003, 0114-07-A
Control Type: Quality
Drainage Area: 117 acres
Receiving Waters: Rosiers Branch

Description: The outlet structure for existing dry pond (0336DP) is frequently clogged, reducing the functionality of the pond. Install a micro-pool with wetland vegetation above outlet structure to reduce clogging. Vegetate the pond bottom and replace concrete channel upstream with vegetated swale with check dams for energy dissipation.



Retrofit to Enhanced ED Basin

Project Area Map

Project Benefits: This project will reduce sediment and nutrient loadings, improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Additional permitting may be required for a project within a stream or wetland. Projects in RPAs may require exceptions. This basin is an existing stormwater facility. A small part of the concrete channel is located on a storm drainage easement. The pond and the remainder of the concrete channel are located on private land and will require a stormwater easement. Accessibility is good from an adjacent Colonial Gas easement from Quail Ridge Court. No tree impacts or significant construction issues are anticipated.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Vegetated Swale	SY	440	\$50.00	\$22,000.00
Organic Compost Soil Amendment	CY	282	\$40.00	\$11,280.00
Plantings	AC	1.05	\$25,000.00	\$26,250.00
Clear and Grub	AC	0.1	\$8,500.00	\$850.00
Grading and Excavation	CY	163	\$35.00	\$5,705.00
Structural BMP and Incidentals (High)	LS	1	\$20,000.00	\$20,000.00
Initial Project Costs				\$86,085.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$4,304.25
<i>Erosion and Sediment Control: 10% of project costs</i>				\$8,608.50
Base Construction Costs				\$98,997.75
<i>Mobilization (5%)</i>				\$4,949.89
Subtotal 1				\$103,947.64
<i>Contingency (25%)</i>				\$25,986.91
Subtotal 2				\$129,934.55
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$58,470.55
Total Costs				\$188,405.09
Estimated Project Costs				\$190,000.00

SU9130 New Stormwater Pond



Address:	702 Jenny Ann Court
Location:	Near Jenny Ann Court cul-de-sac
Land Owner:	Private
PIN:	0104-02-0057E, 0104-17-0044, 0104-17-0045, 0104-17-0046, 0104-17-0047, 0104-17-0048, 0104-17-0049, 0104-17-0050
Control Type	Quality/Quantity
Drainage Area	80 acres
Receiving Waters	Sugarland Run

Description: Iron Ridge Section 2, Potomac Fairways, Van Vlecks, Chestnut Grove, and Graymor subdivisions do not have existing stormwater controls. Install new extended detention dry basin and install vegetated swale behind homes/along Herndon Parkway to direct runoff to new facility.



New Extended Detention Basin

Project Area Map

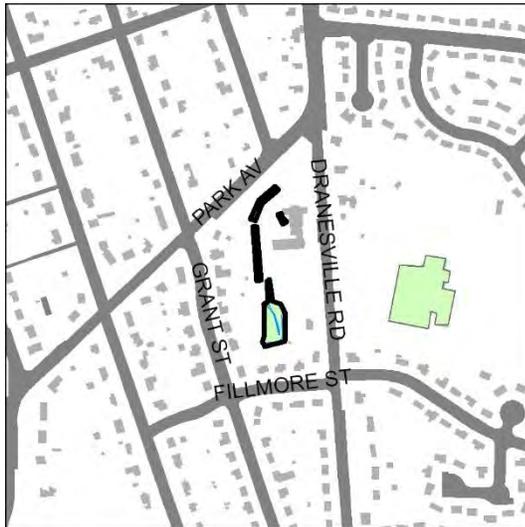
Project Benefits: An estimated six tons/yr of total suspended solids, 124 lbs/yr of nitrogen, and 23 lbs/yr of phosphorus will be removed. This project will also generally improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat. The vegetated swale will promote additional infiltration, evapotranspiration and wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Storm drainage easements will be necessary. Accessibility may be difficult due to treeline along Herndon Parkway and surrounding residential dwellings. Tree impacts are expected. No significant construction issues are anticipated.

Costs:

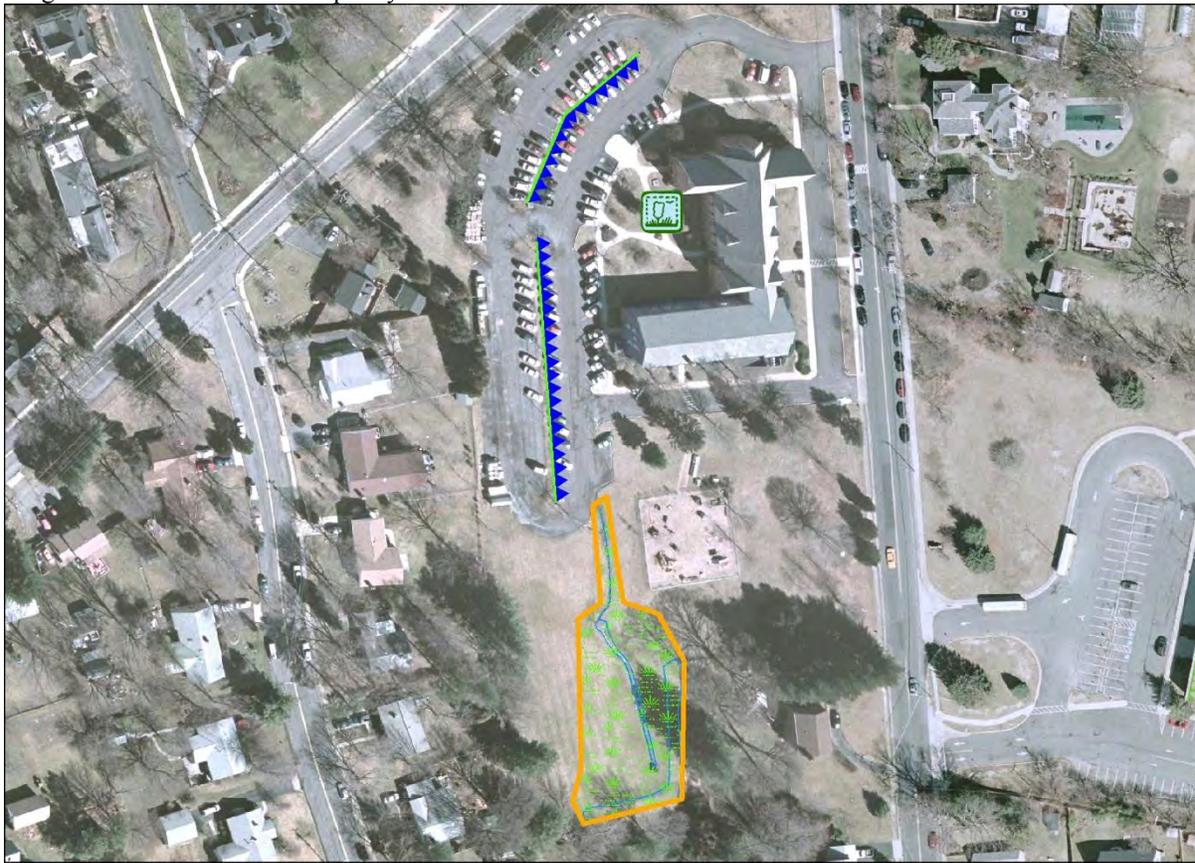
<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Vegetated Swale	SY	300	\$50.00	\$15,000.00
Organic Compost Soil Amendment	CY	28	\$40.00	\$1,120.00
Plantings	AC	0.07	\$25,000.00	\$1,750.00
Clear and Grub	AC	0.13	\$8,500.00	\$1,105.00
Grading and Excavation	CY	622	\$35.00	\$21,770.00
Access Road	SY	222	\$25.00	\$5,550.00
Access Road Gate	EA	1	\$2,500.00	\$2,500.00
Embankment	CY	8	\$50.00	\$400.00
Structural BMP and Incidentals (Med)	LS	1	\$15,000.00	\$15,000.00
New Storm Pipe (Med)	LF	20	\$200.00	\$4,000.00
Initial Project Costs				\$68,195.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$3,409.75
<i>Erosion and Sediment Control: 10% of project costs</i>				\$6,819.50
Base Construction Costs				\$78,424.25
<i>Mobilization (5%)</i>				\$3,921.21
Subtotal 1				\$82,345.46
<i>Contingency (25%)</i>				\$20,586.37
Subtotal 2				\$102,931.83
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$46,319.32
Total Costs				\$149,251.15
Estimated Project Costs				\$150,000.00

SU9135 Stormwater Pond Retrofit, BMP/LID



Address: 651 Dranesville Road
Location: Trinity Presbyterian Church
Land Owner: Private
PIN: 0104-07-A2
Control Type: Quality/Quantity
Drainage Area: 10.2 acres
Receiving Waters: Sugarland Run

Description: Retrofit existing dry pond to enhanced extended detention dry basin with marsh areas to improve water quality and quantity treatment. Remove concrete trickle ditch, retrofit outlet structure. Install infiltration trenches in parking lot islands for additional quality control.



 Retrofit to Enhanced ED Basin
  Infiltration Trench
  Rain Garden

Project Area Map

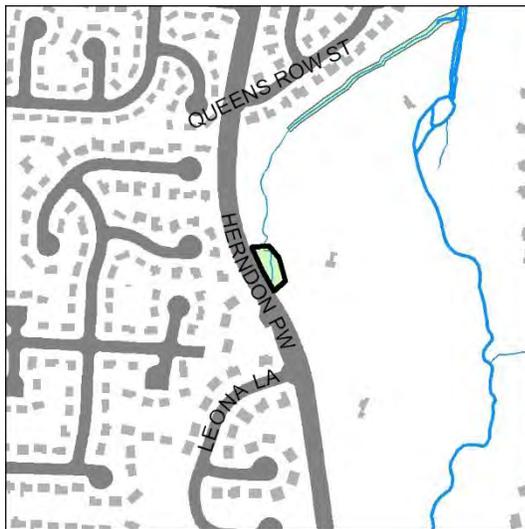
Project Benefits: An estimated one ton/yr of total suspended solids, 25 lbs/yr of nitrogen, and five lbs/yr of phosphorus will be removed. This project will also generally improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat. Additionally, the rain garden and infiltration trenches will reduce stormwater peak flows for small storm events, reduce stormwater runoff volumes by promoting infiltration and evapotranspiration, and provide for wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. This basin is an existing stormwater facility located on private land. Storm drainage easements will be necessary. Accessibility is excellent from Trinity Presbyterian Church parking lot. No tree impacts or significant construction issues are anticipated.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Vegetated Swale	SY	178	\$50.00	\$8,900.00
Percolation/Infiltration Trench	SY	939	\$75.00	\$70,425.00
Bioretention Filters & Basin	SY	84	\$150.00	\$12,600.00
Organic Compost Soil Amendment	CY	169	\$40.00	\$6,760.00
Plantings	AC	0.42	\$25,000.00	\$10,500.00
Grading and Excavation	CY	556	\$35.00	\$19,460.00
Embankment	CY	10	\$50.00	\$500.00
Outflow Pipe	LF	20	\$125.00	\$2,500.00
RipRap Stabilization	SY	8	\$100.00	\$800.00
Structural BMP Retrofit and Incidentals (Low)	LS	1	\$10,000.00	\$10,000.00
Initial Project Costs				\$142,445.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$7,122.25
<i>Erosion and Sediment Control: 10% of project costs</i>				\$14,244.50
Base Construction Costs				\$163,811.75
<i>Mobilization (5%)</i>				\$8,190.59
Subtotal 1				\$172,002.34
<i>Contingency (25%)</i>				\$43,000.58
Subtotal 2				\$215,002.92
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$96,751.31
Total Costs				\$311,754.24
Estimated Project Costs				\$320,000.00

SU9136 New Stormwater Pond



Address:	215 Herndon Parkway
Location:	Hunter's Creek Pool
Land Owner:	Private
PIN:	0113-04-C
Control Type	Quality/Quantity
Drainage Area	161 acres
Receiving Waters	Sugarland Run

Description: Hunter's Creek and Hunter's Creek Section 2, Ashburn, The Villages, Runnymede Manor Chelmsford, Cassa Goettling, Sugar Land Heights, Yount, and Madison Forest subdivisions have no existing stormwater controls and the receiving stream is deteriorating due to high storm flows. Install a new extended detention dry basin just downstream of Runnymede Park on Hunter's Creek Pool property.



 New Extended Detention Basin

Project Area Map

Project Benefits: An estimated three tons/yr of total suspended solids, 51 lbs/yr of nitrogen, and nine lbs/yr of phosphorus will be removed. This project will also generally improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Additional permitting may be required for a project within a stream or wetland. A storm drainage easement will be necessary. Accessibility is excellent from Hunter's Creek pool parking lot. Some tree impacts are expected. No significant construction issues are anticipated.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	35	\$40.00	\$1,400.00
Plantings	AC	0.05	\$25,000.00	\$1,250.00
Clear and Grub	AC	0.80	\$8,500.00	\$6,800.00
Grading and Excavation	CY	400	\$35.00	\$14,000.00
Access Road	SY	60	\$25.00	\$1,500.00
Access Road Gate	EA	1	\$2,500.00	\$2,500.00
Embankment	CY	15	\$50.00	\$750.00
Structural BMP and Incidentals (Med)	LS	1	\$15,000.00	\$15,000.00
New Storm Pipe (Med)	LF	30	\$200.00	\$6,000.00
Initial Project Costs				\$49,200.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$2,460.00
<i>Erosion and Sediment Control: 10% of project costs</i>				\$4,920.00
Base Construction Costs				\$56,580.00
<i>Mobilization (5%)</i>				\$2,829.00
Subtotal 1				\$59,409.00
<i>Contingency (25%)</i>				\$14,852.25
Subtotal 2				\$74,261.25
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$33,417.56
Total Costs				\$107,678.81
Estimated Project Costs				\$110,000.00

SU9139 Stormwater Pond Retrofit



Address: 1748 Stuart Pointe Lane
Location: Towns at Stuart Pointe
Subdivision, Stuart Pointe Lane
Land Owner: County
PIN: 0171-24-A
Control Type: Quality/Quantity
Drainage Area: 3 acres
Receiving Waters: Sugarland Run

Description: Retrofit Towns at Stuart Pointe dry pond (1456 DP) to enhanced extended detention with marsh areas. Remove concrete trickle ditch and install proper outlet structure.



Project Area Map

Project Benefits: This project will reduce sediment and nutrient loadings, improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. This basin is an existing County facility, and is located within a storm drainage easement on private land. Accessibility is excellent from Stuart Pointe Lane. Tree impacts are expected. No significant construction issues are anticipated.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	31	\$40.00	\$1,240.00
Plantings	AC	0.08	\$25,000.00	\$2,000.00
Clear and Grub	AC	0.05	\$8,500.00	\$425.00
Grading and Excavation	CY	367	\$35.00	\$12,845.00
Embankment	CY	11	\$50.00	\$550.00
Outflow Pipe	LF	20	\$125.00	\$2,500.00
RipRap Stabilization	SY	8	\$100.00	\$800.00
Structural BMP Retrofit and Incidentals (Low)	LS	1	\$10,000.00	\$10,000.00
Initial Project Costs				\$30,360.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$1,518.00
<i>Erosion and Sediment Control: 10% of project costs</i>				\$3,036.00
Base Construction Costs				\$34,914.00
<i>Mobilization (5%)</i>				\$1,745.70
Subtotal 1				\$36,659.70
<i>Contingency (25%)</i>				\$9,164.93
Subtotal 2				\$45,824.63
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$20,621.08
Total Costs				\$66,445.71
Estimated Project Costs				\$70,000.00

SU9143 Stormwater Pond Retrofit



Address: 347 Elden Street
Location: Near Grove Street & Herndon Parkway
Land Owner: Private
PIN: 0171-02-0027, 0171-02-0028, 0171-02-0029
Control Type: Quality/Quantity
Drainage Area: 3 acres
Receiving Waters: Sugarland Run

Description: Retrofit two existing dry ponds along Grove Street to enhanced extended detention dry basins with marsh areas and appropriate outlet structures to improve pond efficiency and function.



Project Area Map

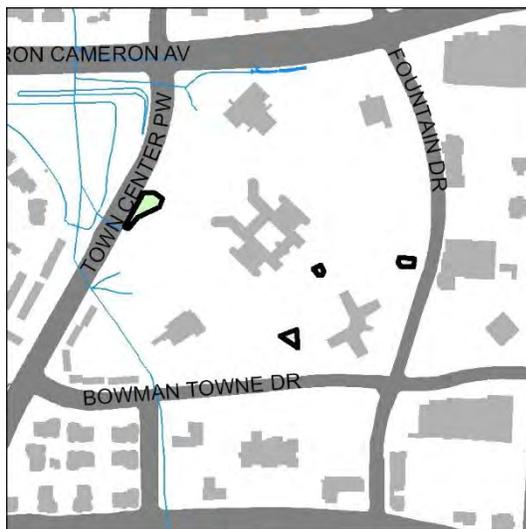
Project Benefits: This project will generally improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. These basins are existing stormwater facilities located on private land. Storm drainage easements will be necessary. Accessibility is excellent from Grove Street and nearby parking lots. No tree impacts or significant construction issues are anticipated. These basins are landscaped with herbaceous vegetation.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	63	\$40.00	\$2,520.00
Plantings	AC	0.23	\$25,000.00	\$5,750.00
Clear and Grub	AC	0.1	\$8,500.00	\$850.00
Grading and Excavation	CY	756	\$35.00	\$26,460.00
Embankment	CY	20	\$50.00	\$1,000.00
Outflow Pipe	LF	40	\$125.00	\$5,000.00
RipRap Stabilization	SY	15	\$100.00	\$1,500.00
Structural BMP Retrofit and Incidentals (Low)	LS	2	\$10,000.00	\$20,000.00
Initial Project Costs				\$63,080.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$3,154.00
<i>Erosion and Sediment Control: 10% of project costs</i>				\$6,308.00
Base Construction Costs				\$72,542.00
<i>Mobilization (5%)</i>				\$3,627.10
Subtotal 1				\$76,169.10
<i>Contingency (25%)</i>				\$19,042.28
Subtotal 2				\$95,211.38
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$42,845.12
Total Costs				\$138,056.49
Estimated Project Costs				\$140,000.00

SU9144 New Stormwater Pond, BMP/LID



Address: (nearest) 1778 Fountain Drive
Location: Bowman Towne Drive & Fountain Drive
Land Owner: Park/Private
PIN: 0171-01-0014B, 0171-01-0014D, 0171-01-0014E, 0171-01-0014F
Control Type: Quality/Quantity
Drainage Area: 31 acres
Receiving Waters: Sugarland Run

Description: Some of this area does not have existing stormwater treatment. Install three new extended detention dry basins. Daylight stormwater runoff from storm sewers into basin. Install rain garden around existing depressed inlet.



 New Extended Detention Basin  Rain Garden

Project Area Map

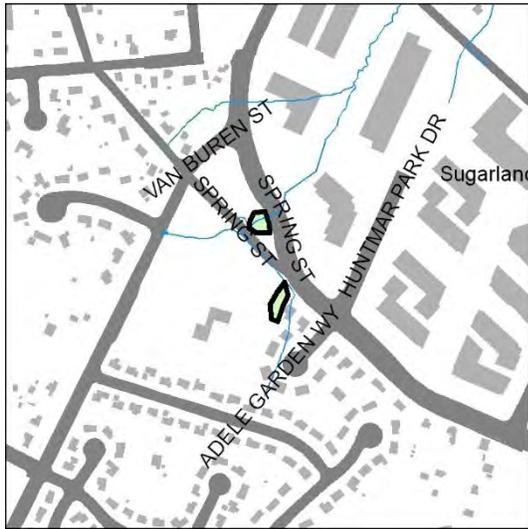
Project Benefits: An estimated 23 tons/yr of total suspended solids, 480 lbs/yr of nitrogen, and 106 lbs/yr of phosphorus will be removed. This project will also generally improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat. The rain garden will promote additional infiltration, evapotranspiration and wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. One of the three new stormwater basins are located on County park land, the remaining two basins and rain garden are located on private land. Storm drainage easements will be necessary. Accessibility is excellent from Town Center Parkway, Fountain Drive, and parking lots off of Bowman Towne Drive. Tree impacts are expected. The basins must be deep enough to intercept piped storm sewers.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	110	\$40.00	\$4,400.00
Plantings	AC	0.21	\$25,000.00	\$5,250.00
Clear and Grub	AC	0.15	\$8,500.00	\$1,275.00
Grading and Excavation	CY	867	\$35.00	\$30,345.00
Access Road	SY	220	\$25.00	\$5,500.00
Access Road Gate	EA	1	\$2,500.00	\$2,500.00
Structural BMP and Incidentals (Low)	LS	3	\$10,000.00	\$30,000.00
New Storm Pipe (Low)	LF	60	\$100.00	\$6,000.00
Embankment	CY	22	\$50.00	\$1,100.00
RipRap Stabilization	SY	30	\$100.00	\$3,000.00
Initial Project Costs				\$89,370.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$4,468.50
<i>Erosion and Sediment Control: 10% of project costs</i>				\$8,937.00
Base Construction Costs				\$102,775.50
<i>Mobilization (5%)</i>				\$5,138.78
Subtotal 1				\$107,914.28
<i>Contingency (25%)</i>				\$26,978.57
Subtotal 2				\$134,892.84
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$60,701.78
Total Costs				\$195,594.62
Estimated Project Costs				\$200,000.00

SU9146 Stormwater Pond Retrofit, New Stormwater Pond



Address: 550 Van Buren Street & 491 Spring Street
Location: Next to St. Timothy's Episcopal Church, Spring Street
Land Owner: County/Private
PIN: 0162-02-0156A, 0162-36-A
Control Type: Quality/Quantity
Drainage Area: 35.2 acres
Receiving Waters: Sugarland Run

Description: The residential and institutional area along Van Buren Street has inadequate existing stormwater control. Construct new extended detention dry pond and improve the existing dry pond by removing concrete trickle ditch and planting wetland vegetation.



 New Extended Detention Basin  Retrofit to ED Basin

Project Area Map

Project Benefits: This project will reduce sediment and nutrient loadings, improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Additional permitting may be required for a project within a stream or wetland. The existing dry pond is a County stormwater facility and is located within a storm drainage easement and landscape easement. It is adjacent to a private water easement. A storm drainage easement may be necessary for the new dry pond, which is located on private land. Accessibility is excellent from Spring Street and nearby parking lots. Tree impacts are expected. No significant construction issues are anticipated.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	97	\$40.00	\$3,880.00
Plantings	AC	0.24	\$25,000.00	\$6,000.00
Clear and Grub	AC	0.14	\$8,500.00	\$1,190.00
Grading and Excavation	CY	692	\$35.00	\$24,220.00
Access Road	SY	111	\$25.00	\$2,775.00
Access Road Gate	EA	1	\$2,500.00	\$2,500.00
Structural BMP and Incidentals (Low)	LS	1	\$10,000.00	\$10,000.00
New Storm Pipe (Low)	LF	30	\$100.00	\$3,000.00
Embankment	CY	15	\$50.00	\$750.00
RipRap Stabilization	SY	11	\$100.00	\$1,100.00
Initial Project Costs				\$55,415.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$2,770.75
<i>Erosion and Sediment Control: 10% of project costs</i>				\$5,541.50
Base Construction Costs				\$63,727.25
<i>Mobilization (5%)</i>				\$3,186.36
Subtotal 1				\$66,913.61
<i>Contingency (25%)</i>				\$16,728.40
Subtotal 2				\$83,642.02
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$37,638.91
Total Costs				\$121,280.92
Estimated Project Costs				\$130,000.00

SU9147 Stormwater Pond Retrofit



Address: 2003 Edmund Halley Drive
Location: Near Edmund Halley Drive & Sunrise Valley Drive
Land Owner: Private
PIN: 0173-08-0002A
Control Type: Quality/Quantity
Drainage Area: 11 acres
Receiving Waters: Sugarland Run

Description: Retrofit existing dry pond (DP0372) to enhanced extended detention basin with marsh areas, and proper outlet structure; daylight inlet pipes and remove concrete trickle ditch to improve pond efficiency and provide improved treatment for professional building complex.



Project Area Map

Project Benefits: This project will reduce sediment and nutrient loadings, improve water quality, reduce peak stormwater flows for storms up to a 10-year event, and provide for evapotranspiration and wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. This basin is an existing stormwater facility located on private land. A storm drainage easement will be necessary. Accessibility is excellent from adjacent parking areas off of Edmund Halley Drive. No tree impacts are expected. The basin must be deep enough to daylight piped storm sewers.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	100	\$40.00	\$4,000.00
Plantings	AC	0.25	\$25,000.00	\$6,250.00
Grading and Excavation	CY	796	\$35.00	\$27,860.00
Embankment	CY	200	\$50.00	\$10,000.00
Outflow Pipe	LF	30	\$125.00	\$3,750.00
RipRap Stabilization	SY	8	\$100.00	\$800.00
Structural BMP Retrofit and Incidentals (Low)	LS	1	\$10,000.00	\$10,000.00
Initial Project Costs				\$62,660.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$3,133.00
<i>Erosion and Sediment Control: 10% of project costs</i>				\$6,266.00
Base Construction Costs				\$72,059.00
<i>Mobilization (5%)</i>				\$3,602.95
Subtotal 1				\$75,661.95
<i>Contingency (25%)</i>				\$18,915.49
Subtotal 2				\$94,577.44
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$42,559.85
Total Costs				\$137,137.28
Estimated Project Costs				\$140,000.00

SU9149 New Stormwater Pond, Stream Restoration, Pond Retrofit



Address: 12652 Thunder Chase Drive
Location: Polo Fields Subdivision
Land Owner: Private
PIN: 0164-092B-A, 0164-092C-A, 0164-09-A, 0164-09-B, 0164-09-C, 0164-09-D
Control Type: Quality/Quantity
Drainage Area: 118 acres
Receiving Waters: Sugarland Run

Description: Headwaters of Sugarland Run race through a network of concrete channels at high flows. Remove concrete channel and replace with a natural stream channel; include cross vanes for energy dissipation and stormwater controls at each incoming tributary.



Project Area Map

Project Benefits: An estimated one ton/yr of total suspended solids, 81 lbs/yr of nitrogen, and 11 lbs/yr of phosphorus will be removed. This project will also reduce stormwater peak flows, generally reduce sediment and nutrient loadings, improve water quality, promote infiltration, and provide for evapotranspiration and wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Additional permitting may be required for a project within a stream or wetland. Storm drainage easements will be necessary. Accessibility is good from Sunrise Valley Drive, Roark Court, Bayard Drive, Darius Lane, Thunder Chase Drive, and an adjacent walking path. Tree impacts are expected. There are no significant construction issues anticipated.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	133	\$40.00	\$5,320.00
Plantings	AC	0.32	\$25,000.00	\$8,000.00
Clear and Grub	AC	0.37	\$8,500.00	\$3,145.00
Grading and Excavation	CY	2791	\$35.00	\$97,685.00
Access Road	SY	890	\$25.00	\$22,250.00
Access Road Gate	EA	4	\$2,500.00	\$10,000.00
Structural BMP and Incidentals (Low)	LS	7	\$10,000.00	\$70,000.00
New Storm Pipe (Low)	LF	130	\$100.00	\$13,000.00
Embankment	CY	93	\$50.00	\$4,650.00
Outflow Pipe	LF	20	\$125.00	\$2,500.00
RipRap Stabilization	SY	11	\$100.00	\$1,100.00
Construct New Channel	LF	2700	\$200.00	\$540,000.00
Additional Cost (first 500LF)	LF	500	\$200.00	\$100,000.00
			Initial Project Costs	\$877,650.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$43,882.50
<i>Erosion and Sediment Control: 10% of project costs</i>				\$87,765.00
			Base Construction Costs	\$1,009,297.50
			<i>Mobilization (5%)</i>	\$50,464.88
			Subtotal 1	\$1,059,762.38
			<i>Contingency (25%)</i>	\$264,940.59
			Subtotal 2	\$1,324,702.97
			<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>	\$596,116.34
			Total Costs	\$1,920,819.30
			Estimated Project Costs	\$1,930,000.00

SU9150 New Stormwater Pond



Address:	12210 Nutmeg Lane
Location:	Near Nutmeg Lane cul-de-sac
Land Owner:	Private
PIN:	0173-04080099, 0261-10-0010, 0261-10-0011
Control Type	Quality/Quantity
Drainage Area	13 acres
Receiving Waters	Sugarland Run

Description: This area does not have existing stormwater controls. Install new extended detention dry basin behind apartments and school. Capture drainage from outfall and drainage channel.



 New Extended Detention Basin

Project Area Map

Project Benefits: An estimated one ton/yr of total suspended solids, 16 lbs/yr of nitrogen, and three lbs/yr of phosphorus will be removed. This project will also reduce peak stormwater flows for storms up to a 10-year event, provide for evapotranspiration and improve wildlife habitat.

Project Design Considerations: Minimal environmental permitting requirements are anticipated. Additional permitting may be required for a project within a stream or wetland. A storm drainage easement will be necessary. Accessibility may be difficult due to the surrounding woodland. Access can be taken from Laurel Glade Court and Nutmeg Lane. Tree impacts are expected. The basin must be deep enough to intercept piped storm sewers.

Costs:

<i>Item</i>	<i>Units</i>	<i>Quantity</i>	<i>Unit Cost</i>	<i>Total</i>
Organic Compost Soil Amendment	CY	56	\$40.00	\$2,240.00
Plantings	AC	0.28	\$25,000.00	\$7,000.00
Clear and Grub	AC	0.28	\$8,500.00	\$2,380.00
Grading and Excavation	CY	1340	\$35.00	\$46,900.00
Access Road	SY	111	\$25.00	\$2,775.00
Access Road Gate	EA	1	\$2,500.00	\$2,500.00
Embankment	CY	500	\$50.00	\$25,000.00
Structural BMP and Incidentals (Med)	LS	1	\$15,000.00	\$15,000.00
New Storm Pipe (Med)	LF	30	\$200.00	\$6,000.00
Initial Project Costs				\$109,795.00
<i>Plantings: 5% of project costs (unless incl. as line item)</i>				\$0.00
<i>Ancillary Items: 5% of project cost</i>				\$5,489.75
<i>Erosion and Sediment Control: 10% of project costs</i>				\$10,979.50
Base Construction Costs				\$126,264.25
<i>Mobilization (5%)</i>				\$6,313.21
Subtotal 1				\$132,577.46
<i>Contingency (25%)</i>				\$33,144.37
Subtotal 2				\$165,721.83
<i>Engineering Design, Surveys, Land Acquisition, Utility Relocation and Permits (45%)</i>				\$74,574.82
Total Costs				\$240,296.65
Estimated Project Costs				\$250,000.00