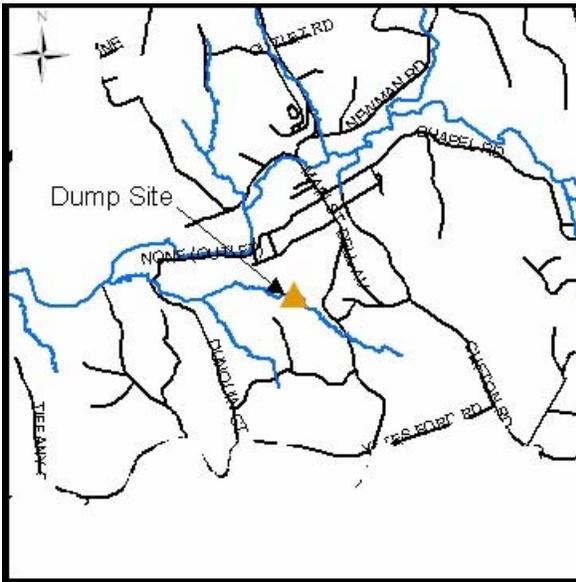


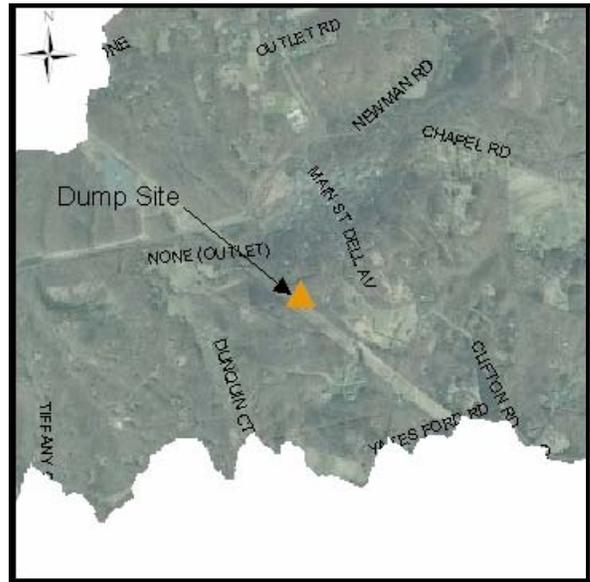
Appendix K: Obstruction Removal Projects

Kincheloe Road Debris Removal

Project Location: Kincheloe Road
Project Type: Debris Removal
Project ID: PH9900 (LP-7)
Stream Name: Unnamed Tributary to Popes Head Creek Tributary No. 5



Vicinity Map.



Site Overview.



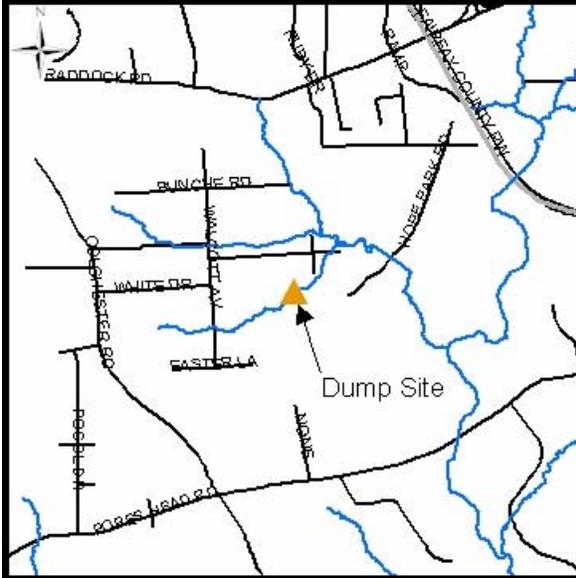
Action: Removal of 55-Gallon Drums, tires, and trash
Benefit: Removal of unsightly debris and potentially leaking oil drums
Estimated Cost: \$4,000

PLANNING COST ESTIMATES
PH9900 - Kincheloe Road

No.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Solid Pickup 55 gal drums	2	EA	\$ 232	\$ 464.00
2	Solid Pickup Bulk material	1	Tons	\$ 580	\$ 580.00
3	Transportation to Disposal Site	10	Mi	\$ 4.60	\$ 46.00
4	Dumpsite disposal charge	1	Tons	\$ 464	\$ 556.80
Subtotal Construction Cost = \$					1,647.00
Mobilization (10%) = \$					165.00
Subtotal 1 = \$					1,812.00
Contingency (25%) = \$					453.00
Subtotal 2 = \$					2,265.00
Engineering Design, Surveys, Land Acquisition, Utility Relocations and Permits (45%) = \$					1,019.00
Total = \$					3,284.00
ESTIMATED PROJECT COST = \$					4,000.00

Hope Park Road Debris Removal

Project Location: Hope Park Road.
Project Type: Debris Removal.
Project ID: PH9960 (PB-MN-1)
Stream Name: Unnamed Tributary to Piney Branch.



Vicinity Map.



Site Overview.



Action: Remove debris
Benefit: Reduce safety risk and eliminate pollutant source
Estimated Cost: \$3,000

PLANNING COST ESTIMATES
PH9960 - Hope Park #1

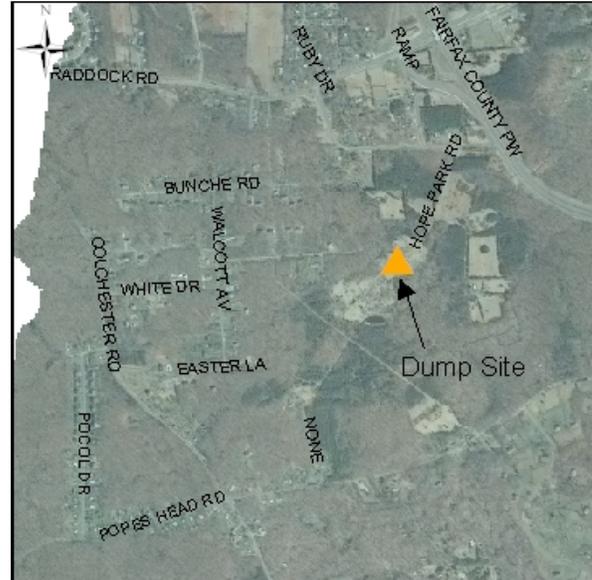
No.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Solid Pickup 55 gal drums	0	EA	\$ 232	\$ -
2	Solid Pickup Bulk material	1	Tons	\$ 580	\$ 580.00
3	Transportation to Disposal Site	10	Mi	\$ 4.60	\$ 46.00
4	Dumpsite disposal charge	1	Tons	\$ 464	\$ 556.80
Subtotal Construction Cost =					\$ 1,183.00
Mobilization (10%) =					\$ 118.00
Subtotal 1 =					\$ 1,301.00
Contingency (25%) =					\$ 325.00
Subtotal 2 =					\$ 1,626.00
Engineering Design, Surveys, Land Acquisition, Utility Relocations and Permits (45%) =					\$ 732.00
Total =					\$ 2,358.00
ESTIMATED PROJECT COST =					\$ 3,000.00

Hope Park Road #2 Debris Removal

Project Location: Hope Park Road
Project Type: Debris Removal
Project ID: PH9961 (PB-MN-3)
Stream Name: Unnamed Tributary to Piney Branch.



Vicinity Map.



Site Overview.



Action: Remove debris from site, restore stream and riparian planting
Benefit: Reduce safety risk and eliminate pollutant source
Estimated Cost: \$1,400,000

Site: Hope Park #2
 PH9961 - Hope Park #2

DESCRIPTION	DRAINAGE		QUANTITY	UNIT	UNIT PRICE	TOTAL
	AREA (AC)	% IMPERVIOUS				
Excavation			23100	CY	\$ 26.50	\$ 612,150.00
Riparian Planting			3.0	AC	\$ 10,000.00	\$ 30,000.00
Streambank Improvements			750	LF	\$ 80.00	\$ 60,000.00
Manufactured BMP (Filterra)				LS	\$ 3,000.00	\$ -
Remove concrete				SY	\$ 90.00	\$ -

Subtotal Construction Cost = \$ 702,150.00
 Mobilization & Erosion Control (10%) = \$ 70,215.00
 Subtotal 1 = \$ 772,365.00

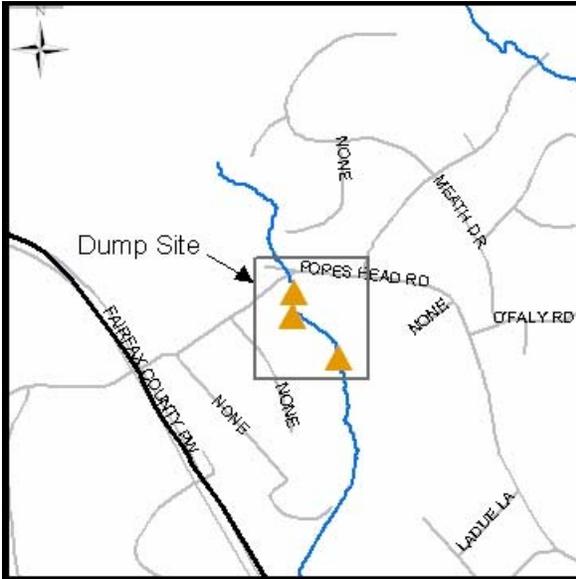
Contingency (25%) = \$ 193,091.00
 Subtotal 2 = \$ 965,456.00

Engineering Design, Surveys, Land Acquisition,
 Utility Relocations and Permits (45%) = \$ 434,455.00
 Total = \$ 1,399,911.00

ESTIMATED PROJECT COST = \$ 1,400,000.00

Popes Head Road Dump Clean Up

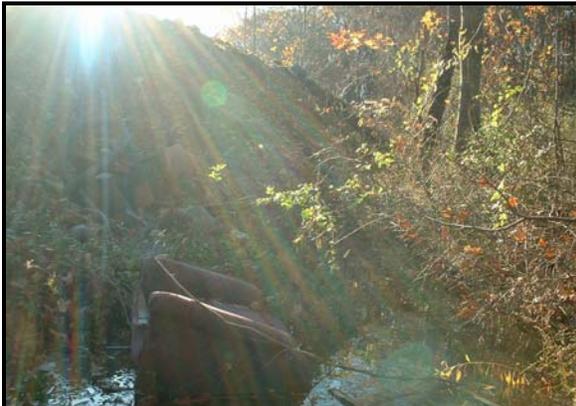
Project: Popes Head Road
Project Type: Removal of debris which includes furniture, pallets, pulleys, and lawn waste
Project ID: PH9962 (PH2-MN-1)
Stream Name: Popes Head Creek Tributary No. 2



Vicinity Map.



Site Overview.



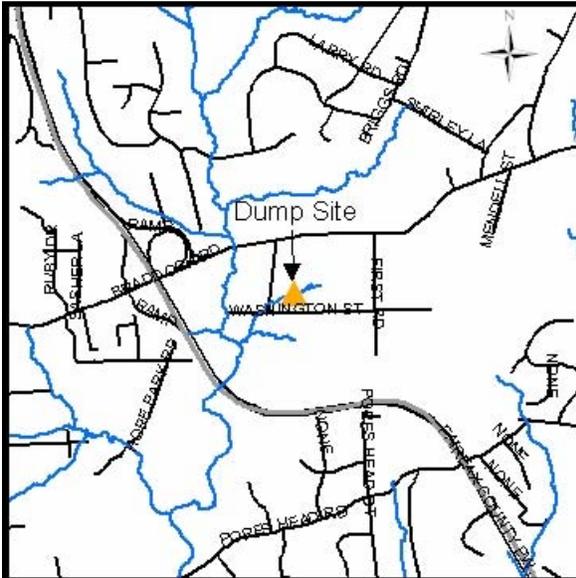
Action: Remove debris from site
Benefit: Reduce safety risk and eliminate pollutant source
Estimated Cost: \$5,000

PLANNING COST ESTIMATES
PH9962 - Popes Head Road

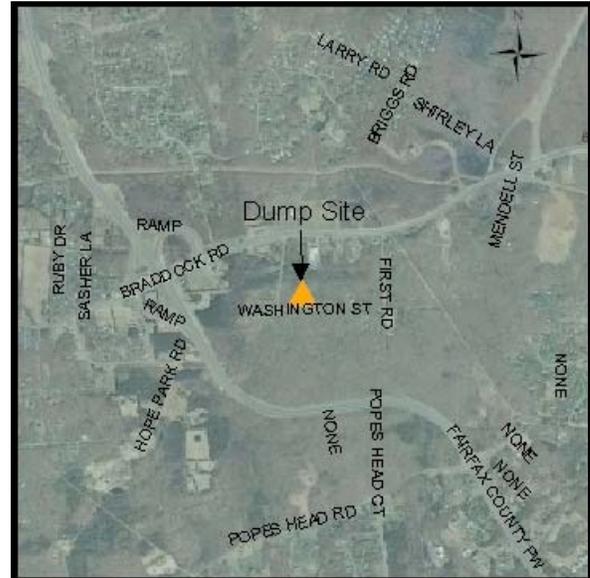
No.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Solid Pickup 55 gal drums	0	EA	\$ 232	\$ -
2	Solid Pickup Bulk material	2	Tons	\$ 580	\$ 1,160.00
3	Transportation to Disposal Site	10	Mi	\$ 4.60	\$ 46.00
4	Dumpsite disposal charge	2	Tons	\$ 464	\$ 928.00
Subtotal Construction Cost =					\$ 2,134.00
Mobilization (10%) =					\$ 213.00
Subtotal 1 =					\$ 2,347.00
Contingency (25%) =					\$ 587.00
Subtotal 2 =					\$ 2,934.00
Engineering Design, Surveys, Land Acquisition, Utility Relocations and Permits (45%) =					\$ 1,320.00
Total =					\$ 4,254.00
ESTIMATED PROJECT COST =					\$ 5,000.00

Washington Street Automobile/Debris Removal

Project Location: Washington Street
Project Type: Automobile/Debris Removal
Project ID: PH9970 (PB-MN-2)
Stream Name: Unnamed Tributary to Piney Branch



Vicinity Map.



Site Overview.



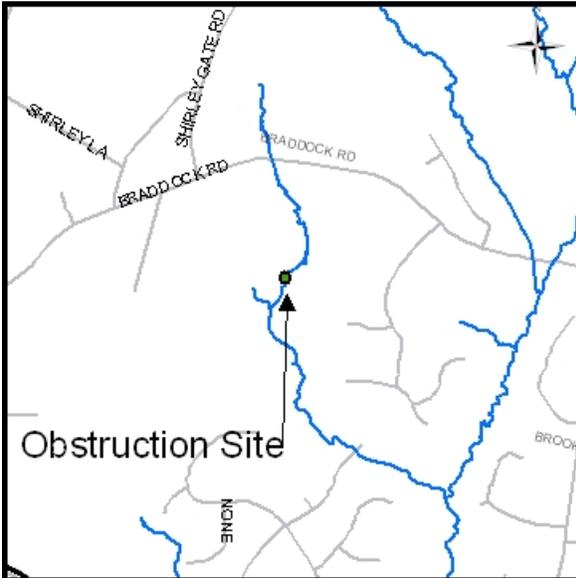
Action: Remove automobiles and other debris
Benefit: Reduce safety risk and eliminate pollutant source
Estimated Cost: \$5,000

PLANNING COST ESTIMATES
PH9970 - Washington Street

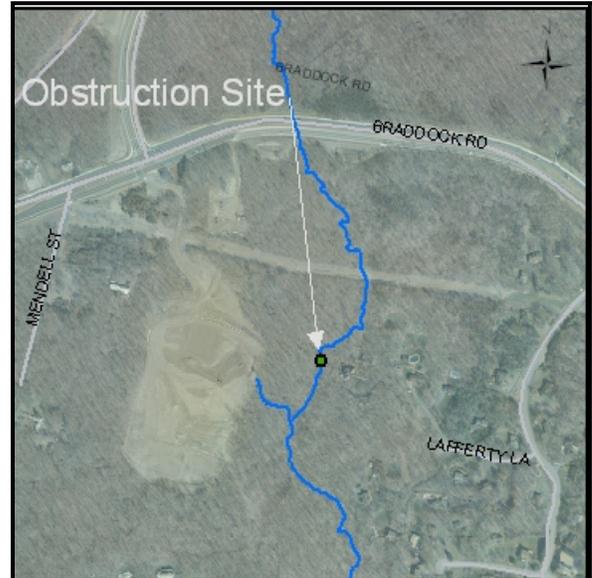
No.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Solid Pickup 55 gal drums	0	EA	\$ 232	\$ -
2	Solid Pickup Bulk material	2	Tons	\$ 580	\$ 1,160.00
3	Transportation to Disposal Site	10	Mi	\$ 4.60	\$ 46.00
4	Dumpsite disposal charge	2	Tons	\$ 464	\$ 928.00
Subtotal Construction Cost =					\$ 2,134.00
Mobilization (10%) =					\$ 213.00
Subtotal 1 =					\$ 2,347.00
Contingency (25%) =					\$ 587.00
Subtotal 2 =					\$ 2,934.00
Engineering Design, Surveys, Land Acquisition, Utility Relocations and Permits (45%) =					\$ 1,320.00
Total =					\$ 4,254.00
ESTIMATED PROJECT COST =					\$ 5,000.00

Bentonbrook Obstruction Removal

Structure Location: West of Bentonbrook
 Stream Name: Unnamed tributary to Popes Head
 Project ID: PH9973 (UP-MN-1)
 Type of Structure: Homemade dam and collapsed bridge



Vicinity Map.



Site Overview.



Homemade dam looking upstream



Collapsed footbridge looking upstream

Existing Conditions: Appears to be homemade dam has caused the stream to back up water and an 18" jump between channel inverts has been formed. Fish in the 1"-6" range were seen in the stream downstream of the dam. Wooden footbridge has collapsed and is causing an obstruction in flow across stream.

Proposed Actions: Remove dam and footbridge and return stream to natural slope for fish to be able to swim upstream.

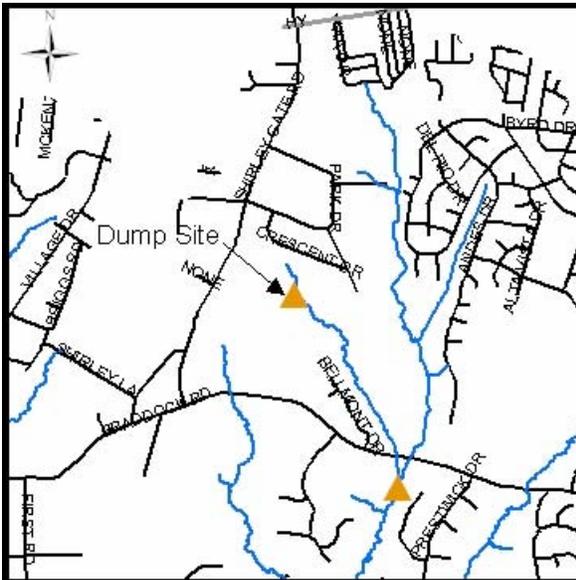
Cost: \$6,000

PLANNING COST ESTIMATES
PH9973 - Bentonbrook

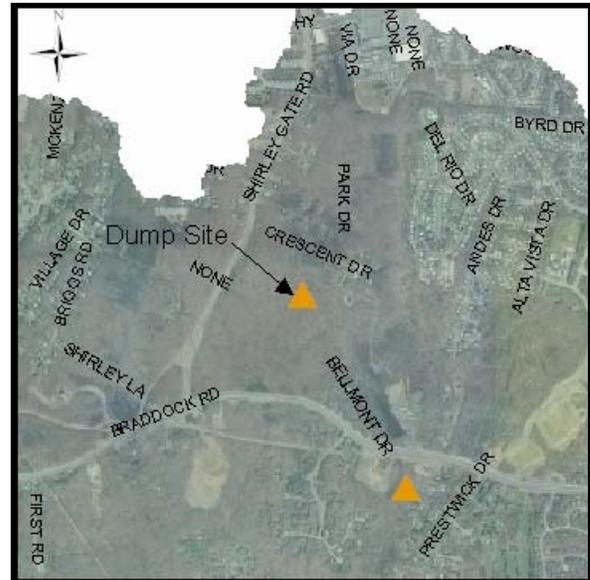
No.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Solid Pickup 55 gal drums	0	EA	\$ 232	\$ -
2	Solid Pickup Bulk material	2.5	Tons	\$ 580	\$ 1,450.00
3	Transportation to Disposal Site	10	Mi	\$ 4.60	\$ 46.00
4	Dumpsite disposal charge	2.5	Tons	\$ 464	\$ 1,160.00
Subtotal Construction Cost =					\$ 2,656.00
Mobilization (10%) =					\$ 266.00
Subtotal 1 =					\$ 2,922.00
Contingency (25%) =					\$ 731.00
Subtotal 2 =					\$ 3,653.00
Engineering Design, Surveys, Land Acquisition, Utility Relocations and Permits (45%) =					\$ 1,644.00
Total =					\$ 5,297.00
ESTIMATED PROJECT COST =					\$ 6,000.00

Crescent Drive Automobile Removal

Project Location: Crescent Drive
Project Type: Automobile Removal
Project ID: PH9981 (UP-MN-3)
Stream Name: Unnamed Tributary to Popes Head Creek



Vicinity Map.



Site Overview.



Action: Remove automobile and other debris
Benefit: Reduce safety risk and eliminate pollutant source
Estimated Cost: \$5,000

PLANNING COST ESTIMATES
PH9981 - Crescent Drive

No.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Solid Pickup 55 gal drums	0	EA	\$ 232	\$ -
2	Solid Pickup Bulk material	2.0	Tons	\$ 580	\$ 1,160.00
3	Transportation to Disposal Site	10	Mi	\$ 4.60	\$ 46.00
4	Dumpsite disposal charge	2.0	Tons	\$ 464	\$ 928.00
Subtotal Construction Cost =					\$ 2,134.00
Mobilization (10%) =					\$ 213.00
Subtotal 1 =					\$ 2,347.00
Contingency (25%) =					\$ 587.00
Subtotal 2 =					\$ 2,934.00
Engineering Design, Surveys, Land Acquisition, Utility Relocations and Permits (45%) =					\$ 1,320.00
Total =					\$ 4,254.00
ESTIMATED PROJECT COST =					\$ 5,000.00