

APPENDIX B

General Problem Area Forms

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA50	Comments
Municipality:	Lower Southampton	This problem area was reported by the Philadelphia Water Department. The subject channel is located in Lower Southampton Township at the outfall of a large industrial area. The reach stability was reported as actively degrading and the bank erosion was classified as high.
Stream name:	Trib to Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description
Severe erosion was noted along this tributary. Multiple trees were found to have been undercut by the erosion.



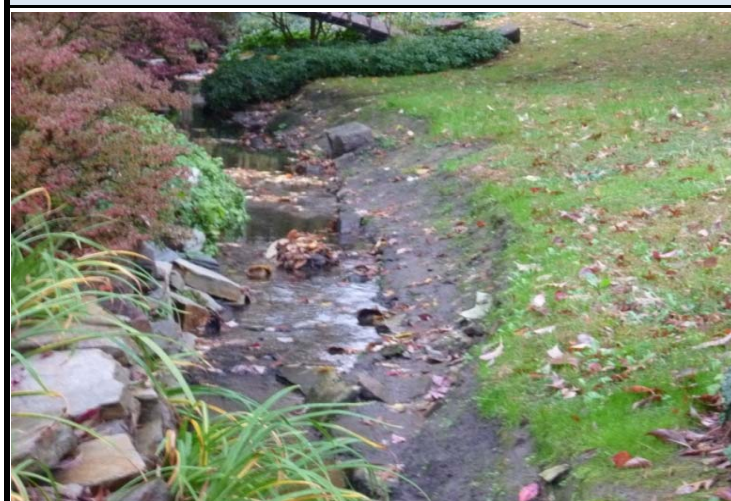
Description
The channel has been eroded approximately 10-12 feet.

Solution	Reduce Peak Flows, Stabilize Stream Bank, 5.4.2, 6.6.2, 6.6.3, 6.4.2
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POQUESSING WATERSHED

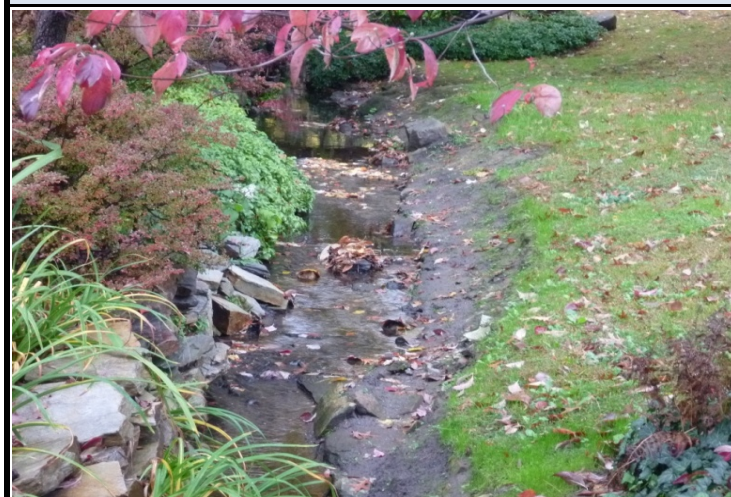
Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA8	Comments
Municipality:	Lower Southampton	This problem area was reported by the Philadelphia Water Department. The subject channel is located in a residential area in the northern portion of the watershed. The reach stability was reported to be degrading and the bank erosion was classified as moderate.
Stream name:	Trib to Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

The bank on the left side of the picture has been adequately stabilized with rock and various plantings and no erosion was observed. Similar stabilization measures could mitigate/prevent erosion on the opposite bank.



Description

Solution

Stabilize Stream Bank, 5.4.2, 6.7.1

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA28	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The subject area is located in the city of Philadelphia at a pedestrian bridge over a tributary to Poquessing Creek. The reach stability was reported as degrading and the bank erosion was classified as high.
Stream name:	Trib to Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

The left side of pedestrian bridge is being undermined. Minor scour was also observed along entire left bank.



Description

Slight undercutting of the banks was observed.

Solution

Reduce Peak Flows, Stabilize Stream Bank, 6.4.2, 6.6.2, 6.6.3

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA27	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The subject stream is located in the city of Philadelphia. The reach stability was reported as degrading and the bank erosion was classified as high.
Stream name:	Trib to Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	

	Description
	Roadway run-off drains through a residential yard in this area. Residents have tried to channelize flow by placing logs along the edge of their property.

	Description
	Severe bank undercutting (5'-6') was observed along this stretch of the stream.


Solution

Reduce Peak Flows, Stabilize Stream Bank, 5.4.3, 6.4.9, 6.7.1

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA51	Comments
Municipality:	Lower Southampton	This problem area was reported by the Philadelphia Water Department. The subject stream is located in Lower Southampton between Hickory Ave. and Eastwood Ave. The reach stability was reported as degrading and the bank erosion was classified as moderate.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	

	Description
	Bank erosion was observed along the right bank. Planting a riparian buffer along the right bank would help to prevent erosion. The left bank has a healthy riparian buffer and very little erosion was observed.

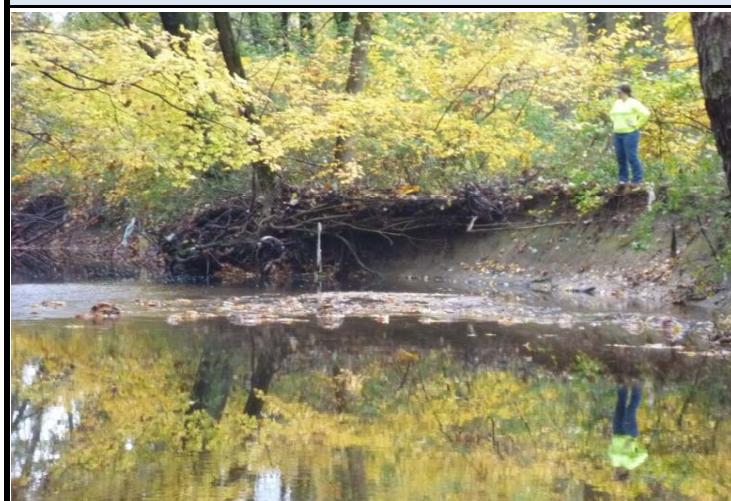
	Description

Solution	Reduce Peak Flows, Stabilize Stream Bank, 6.7.1
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POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA58	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located along Poquessing Creek in the city of Philadelphia. The reach stability was reported as intermediate and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other - ATV TRAIL	



Description

The banks of this channel have eroded 5 to 6 feet. Tree roots are exposed throughout the reach.



Description

In addition to high flows and velocities, stream bank stability is being further jeopardized by the use of recreational vehicles in the area. All Terrain Vehicle (ATV) trails were observed in the area with accelerated bank erosion in areas of heavy use.

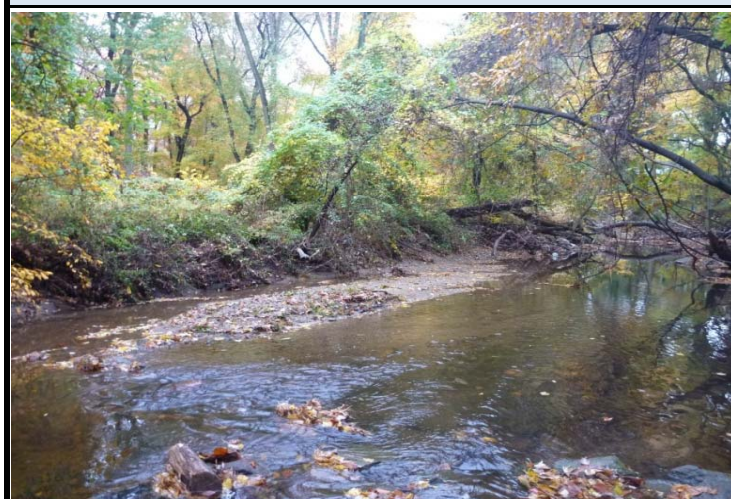
Solution

Reduce Peak Flows, Stabilize Stream Bank, 5.4.2

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	BEA12 - PHA57	Comments
Municipality:	Bensalem / Philadelphia	This problem area was reported by the Philadelphia Water Department and the city of Bensalem. The problem area is located along Poquessing Creek downstream of problem area PHA58 in the city of Philadelphia. The reach stability was reported to be intermediate and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other - Obstruction	



Description
Stream banks have been undercut 3 to 4 feet along this section of stream. Localized sedimentation areas were also observed.




Description
The picture to the left shows a tree that has fallen into Poquessing creek as a result of the stream banks being undercut. The fallen tree has obstructed and diverted flow in the area.

Solution	Reduce Peak Flows, Stabilize Stream Bank, 5.4.2
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POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	BEA13	Comments
Municipality:	Bensalem	This problem area was reported by the city of Bensalem. The problem are is located along Poquessing Creek south of Trevoise Road and just downstream of it's confluence with an Unnamed Tributary.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	

	Description
	The banks along this reach have been eroded 3 to 4 feet.

	Description
	Sedimentation and debris accumulations were also observed at the site.

Solution

Reduce Peak Flows, Stabilize Stream Bank, 5.4.2

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA56	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located along Poquessing Creek in the city of Philadelphia. The reach stability was reported as intermediate and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other - Obstruction	



Description

Stream banks are undercut 6 to 8 feet along this section of the stream. The root systems of several large trees are also being undercut in this area.



Description

This picture shows a tree that has fallen into the stream and collected additional debris which has created an obstruction in this section of Poquessing Creek.

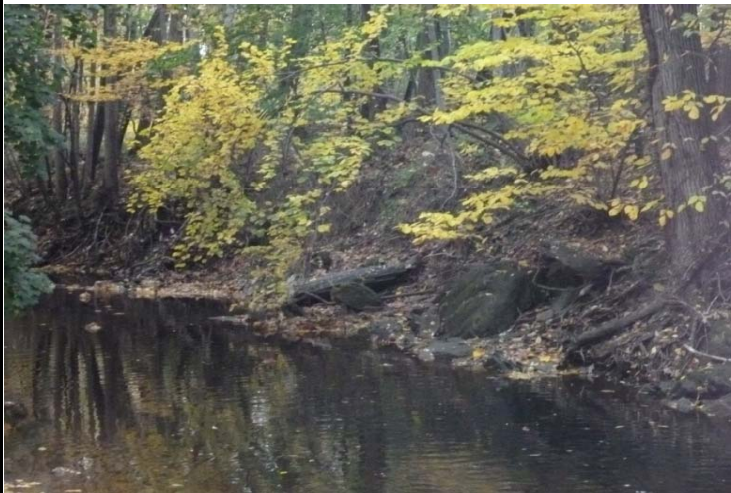
Solution


Remove Debris, Reduce Peak Flows, Stabilize Stream Bank, 5.4.2

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA26 - PHA25 - BEA11	Comments
Municipality:	Philadelphia / Bensalem	This section of stream was reported as a problem area by the Philadelphia Water Department and the city of Bensalem. The problem area is located along Poquessing Creek just south of Liconia Park. The reach stability was reported as intermediate and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	

	Description
	Stream banks are being undercut 3 to 4 feet along this section of stream.

	Description
	Bank undercutting has exposed the root system of several trees in the area. Continued bank undercutting will eventually cause these trees to fall into the stream, which creates additional obstructions within the stream channel.

Solution

Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA24 - PHA23 - BEA10	Comments
Municipality:	Bensalem / Philadelphia	This section of stream was reported as a problem area by the Philadelphia Water Department and the city of Bensalem. The problem area is located along Poquessing Creek within Benjamin Rush State Park. The reach stability was reported as actively degrading and aggrading. The bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

Stream banks are being undercut 5 to 7 feet along this section of stream. Numerous downed trees were noted due to bank undercutting.



Description

The stream banks in this area are unstable with bank undercutting and sloughing observed.

Solution

Remove Debris, Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA22	Comments
Municipality:	Philadelphia	This section of stream was reported as a problem area by the Philadelphia Water Department. The problem area is located along Poquessing Creek within Benjamin Rush State Park. The reach stability was reported as intermediate and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

Bank erosion measuring approximately 5 to 6 feet was observed within this section of stream. Trees were noted as being severely undercut in the area.

Description

Solution

Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA21 - BEA9	Comments
Municipality:	Philadelphia / Bensalem	This section of stream was reported as a problem area by the Philadelphia Water Department and the city of Bensalem. The problem area is located along Poquessing Creek within the southern portion of Benjamin Rush State Park. The reach stability was reported as intermediate and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

Stream banks have eroded 3 to 4 feet in this area with most trees being undercut. As seen in the picture to the left, many of these trees are on the verge of falling into the stream.



Description

Severe erosion, as seen in the photo to the left, can also result in increased sedimentation downstream, loss of property due to expanding top of banks, and a diminished riparian buffer.

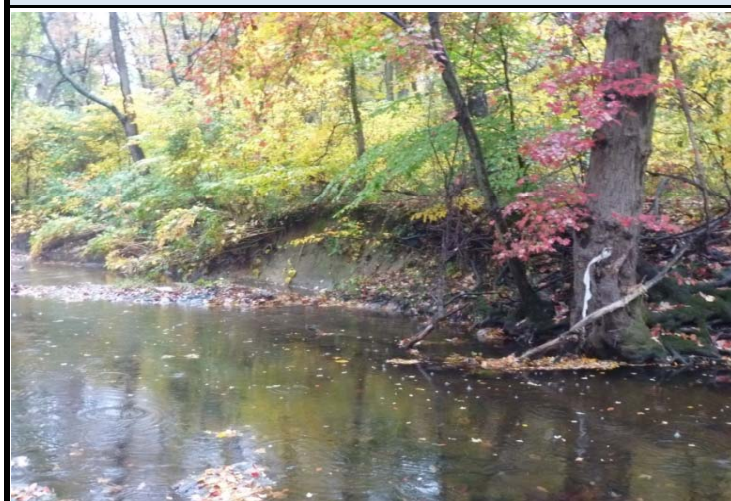
Solution

Reduce Peak Flows, Stabilize Stream Bank, 5.4.2

POQUESSING WATERSHED

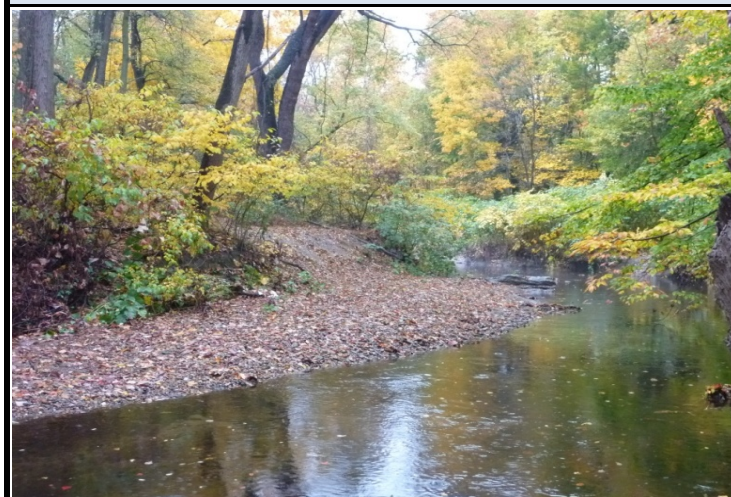
Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA20 - BEA8	Comments
Municipality:	Philadelphia / Bensalem	This section of stream was reported as a problem area by the Philadelphia Water Department and the city of Bensalem. The problem area is located along Poquessing Creek within Poquessing Valley Park. The reach was reported as actively degrading and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other - ATV	



Description

The banks are eroded 4 to 5 feet along this portion of the stream.



Description

Bank instability and erosion within this area can also be attributed to the use of recreational vehicles within and along this section of stream. These vehicles can damage the riparian buffer and decrease bank stability in areas where they travel. The photo to the left shows an area where these vehicles travel and the resulting sediment deposit and degraded streambank.

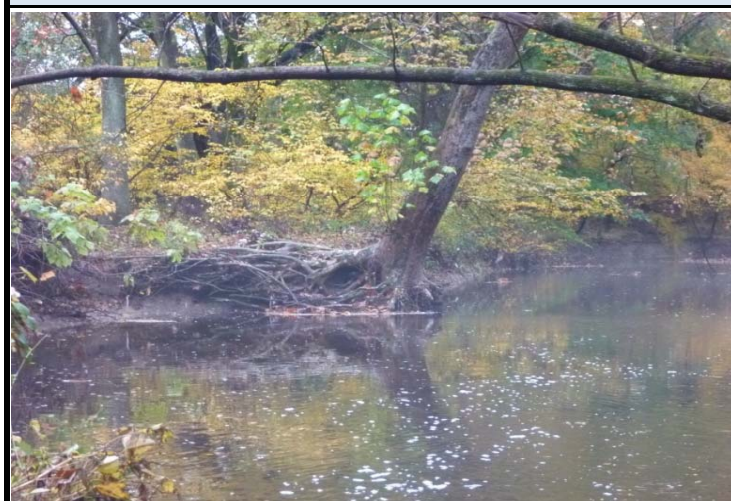
Solution

Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA19 - BEA8	Comments
Municipality:	Philadelphia / Bensalem	This section of stream was reported as a problem area by the Philadelphia Water Department and the city of Bensalem. The problem area is located along Poquessing Creek within southern portion of Poquessing Valley Park. The reach was reported as actively degrading and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description
Numerous trees were observed to be severely undercut. Stream banks were eroded 4 to 5 feet.



Description
Continued undercutting of the stream banks causes trees to fall into the stream. This results in additional stream obstructions and a diminished riparian buffer.

Solution	Clean Debris, Reduce Peak Flows, Stabilize Stream Bank
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POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA49	Comments
Municipality:	Bensalem	This problem area was reported by the Philadelphia Water Department. The problem area is located within the city of Bensalem south of Tilman Drive. The reach was reported as actively degrading and the bank erosion was classified as high.
Stream name:	Trib to Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other - Dumping	



Description

The banks of this tributary are experiencing significant erosion. Bank erosion measuring 2 to 3 feet was observed in this area.



Description

Dumping was also observed in this problem area. Trash containing hazardous materials can lead to water/groundwater pollution in and downstream of the problem area.

Solution

Trash Cleanup, Reduce Peak Flows, Stabilize Stream Bank, 6.4.2, 6.6.2, 6.6.3

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA47	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem are is located along Black Lake Run between McNulty and Mechanicsville road. The reach was reported as actively degrading and the bank erosion was classified as high.
Stream name:	Black Lake Run	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

The banks of this tributary are experiencing significant erosion (5 to 6 feet). Trees along the banks are also in danger of falling due to undercutting.



Description

Erosion similar to that in the photograph above can lead to sediment deposits downstream as evident in the picture to the left.

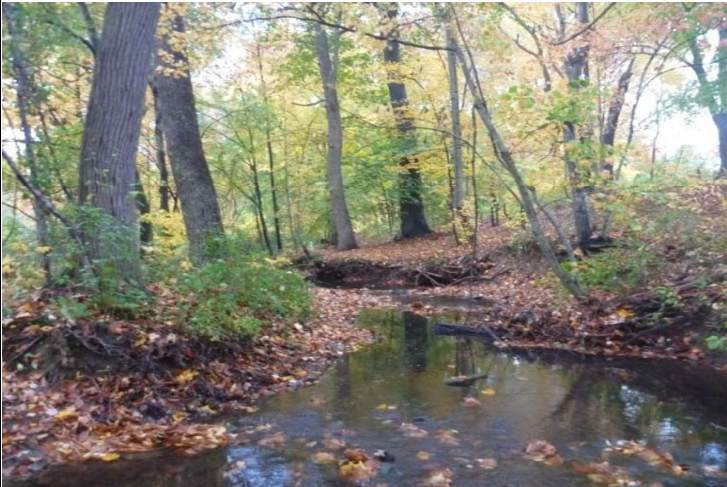
Solution


Reduce Peak Flows, Stabilize Stream Bank, 6.6.2, 6.6.3, 6.4.2

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA48	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located southwest of problem area PHA47 along Black Lake Run between McNulty and Mechanicsville roads. The reach was reported as actively degrading and the bank erosion was classified as high.
Stream name:	Black Lake Run	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	

	Description
	Minor bank erosion measuring less than 2 feet was observed in this area.

	Description
	Bank undercutting has exposed the root system of several trees in the area. Continued bank undercutting will eventually cause these trees to fall into the stream which creates additional obstructions within the stream channel.


Solution


Reduce Peak Flows, Stabilize Stream Bank, 6.6.2, 6.6.3, 6.4.2

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA7	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located northwest of problem area PHA47 along Black Lake Run between McNulty and Townsend roads. The reach was reported as actively degrading and the bank erosion was classified as moderate.
Stream name:	Black Lake Run	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	

	Description
	Sedimentation and stagnant water with significant algae growth was observed in this area.

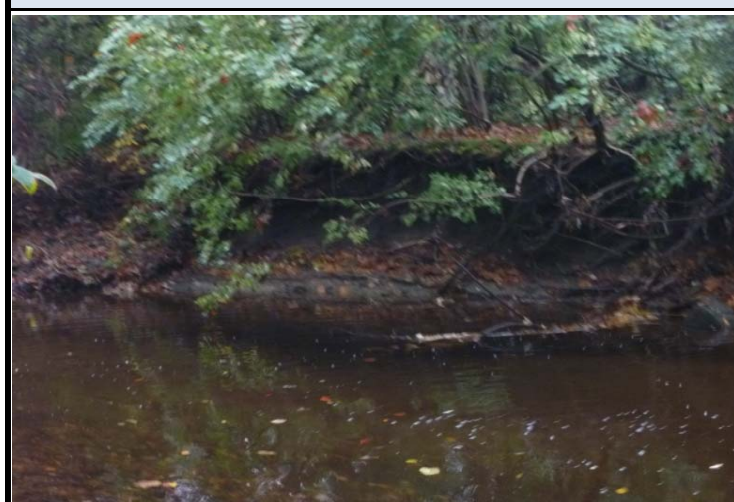
	Description
	Dumping of solid and liquid waste was noticed in this area. Trash and a shiny film on the surface were found during the field view.

Solution	Clean-up Trash. Prevent dumping, 5.4.2, 6.6.2, 6.6.3, 6.4.2
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POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA18 - BEA7	Comments
Municipality:	Philadelphia / Bensalem	This section of stream was reported as a problem area by the Philadelphia Water Department and the city of Bensalem. The problem area is located along Poquessing Creek in the vicinity of the Dunksferry Road crossing. The reach stability was reported as intermediate and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

Undercutting of vegetation along the stream banks and erosion measuring 4 to 5 feet was observed in this area.



Description

Severe erosion of this nature results in increased sediment transport downstream, diminished riparian buffers, and loss of property.

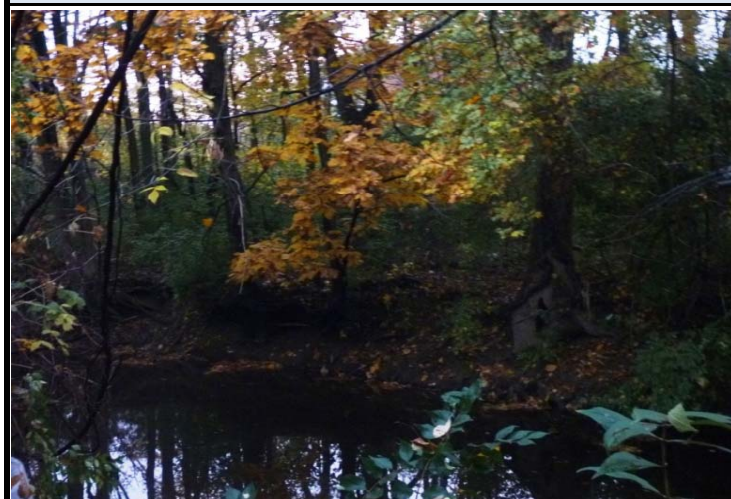
Solution

Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

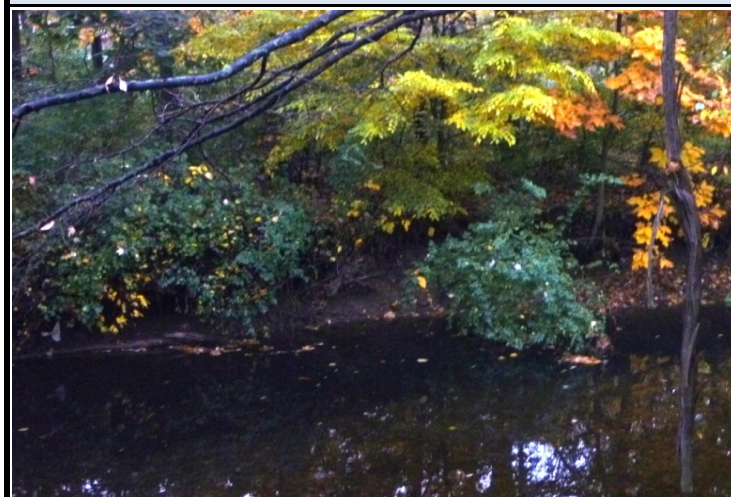
Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA17	Comments
Municipality:	Philadelphia	This section of stream was reported as a problem area by the Philadelphia Water Department. The problem area is located along Poquessing Creek between Dunksferry and Knights Road. The reach stability was reported as intermediate and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

Stream bank erosion measuring 3 to 4 feet was observed in this section of stream.



Description

Severe erosion of the stream banks has exposed the roots systems of vegetation along the stream banks.

Solution

Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA16	Comments
Municipality:	Philadelphia	This section of stream was reported as a problem area by the Philadelphia Water Department. The problem area is located along Poquessing Creek south of Knights Road. The reach stability was reported as intermediate and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other - Pond Failure	



Description

Severe erosion and undercutting of the stream banks measuring 8 to 9 feet was observed in this area. Trees along the banks are also in danger of falling due to undercutting.



Description

A pond within this section of stream shares a bank with Poquessing creek. As evident from the photo to the left, the stream bank is severely eroded which is jeopardizing the stability of the pond embankment. Continued bank erosion will eventually lead to a bank failure and potential flooding downstream.


Solution


Bank Repair/Stabilization, Reduce Peak Flows, 5.4.2

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	BEA6	Comments This problem area was reported by the city of Bensalem. The problem area is located along Poquessing Creek upstream of Knights Road.											
Municipality:	Bensalem												
Stream name:	Poquessing Creek												
Inspected By/Date:	DJS/BAK 10-28-2010												
Checked By/Date:	JMY 04-18-2011												
Type of Problem (highlighted):													
<table><tr><td>1</td><td>Flooding</td></tr><tr><td>2</td><td>Deficient Bridge/Culvert</td></tr><tr><td>3</td><td>Erosion</td></tr><tr><td>4</td><td>Sedimentation</td></tr><tr><td>5</td><td>Water/Groundwater Pollution</td></tr><tr><td>6</td><td>Other</td></tr></table>			1	Flooding	2	Deficient Bridge/Culvert	3	Erosion	4	Sedimentation	5	Water/Groundwater Pollution	6
1	Flooding												
2	Deficient Bridge/Culvert												
3	Erosion												
4	Sedimentation												
5	Water/Groundwater Pollution												
6	Other												

	Description
	Minor erosion measuring less than 1 foot was observed along this section of stream. Banks were also reported as being overgrown with invasive species.

	Description
	Erosion was relatively minor in this section of stream. However, if not properly mitigated, the banks will continue to erode, and a more significant erosion problem will develop.

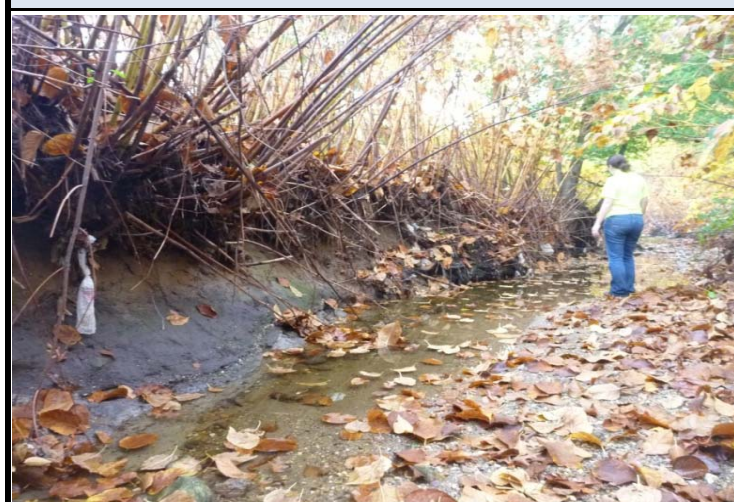
Solution

Stabilize Stream Bank, Replant Native Species

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA45	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located along a tributary to Poquessing Creek . The reach stability was reported as intermediate and the bank erosion was classified as high.
Stream name:	Trib to Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

The banks of this tributary are experiencing significant erosion measuring 3 to 4 feet in height. Banks were also reported as being overgrown with invasive species.



Description

The degradation of the streambanks has lead to subsequent sediment deposits in downstream portions of the tributary.

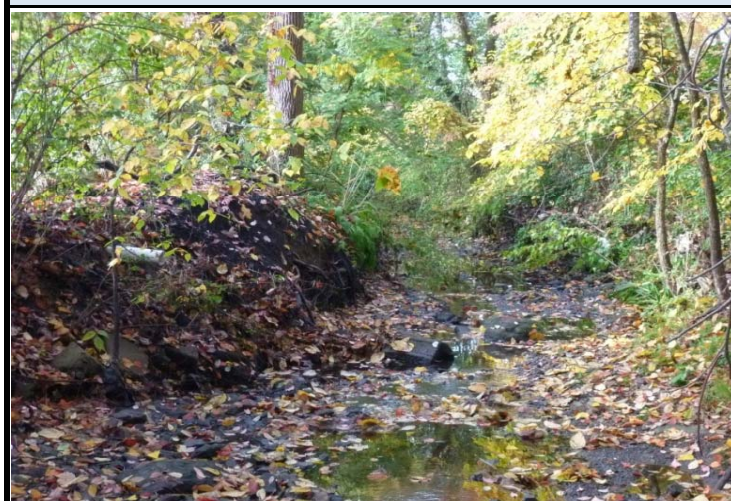
Solution

Reduce Peak Flows, Stabilize Stream Bank, Clear Non-Native Species, 5.6.3

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA52	Comments
Municipality:	Bensalem	This problem area was reported by the Philadelphia Water Department. The problem area is located along a tributary to Poquessing Creek that flows through the Bensalem Country Club. The reach stability was reported as intermediate and the bank erosion was classified as high.
Stream name:	Trib to Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

Bank erosion measuring 3 to 4 feet was observed within this section of stream.



Description

Pipes that discharge directly into the tributary, without any form of outlet protection, contribute the erosion problems observed in this area.

Solution


Reduce Peak Flows, Stabilize Stream Bank, 6.4.2, 6.6.3, 6.6.2, 6.4.1

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA54	Comments
Municipality:	Bensalem	This problem area was reported by the Philadelphia Water Department. The problem area is located along a tributary to Poquessing Creek that flows through the Bensalem Country Club. The reach stability was reported as intermediate and the bank erosion was classified as high.
Stream name:	Trib to Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	

	Description
	Severe erosion measuring 6 to 7 feet was observed in this area.

	Description
	Continued undercutting of the stream banks causes trees to fall into the stream. This results in additional stream obstructions and a diminished riparian buffer.

Solution

Reduce Peak Flows, Stabilize Stream Bank, 6.4.2, 6.6.3, 6.6.2, 6.4.1

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA55	Comments
Municipality:	Bensalem	This problem area was reported by the Philadelphia Water Department. The problem area is located downstream of problem areas PHA 52-54 along a tributary to Poquessing Creek that flows through the Bensalem Country Club. The reach was reported to be actively degrading and the bank erosion was classified as high.
Stream name:	Trib to Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

Numerous trees were observed to be severely undercut. Stream banks were eroded approximately 3 feet along the right bank and 10 to 12 feet along the left bank.



Description

Severe erosion of this nature leads to increased sediment deposits downstream. This problem is demonstrated by PHA5, which is sedimentation problem area located just downstream of the confluence of Poquessing Creek and this tributary.

Solution

Reduce Peak Flows, Stabilize Stream Bank, 6.4.2, 6.6.3, 6.6.2, 6.4.1

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA15 - BEA5	Comments
Municipality:	Philadelphia / Bensalem	This problem area was reported by the Philadelphia Water Department and the Township of Bensalem. The problem area is located to the east of the Franklin Mills Mall on Poquessing Creek. The reach was reported as actively degrading and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description
The banks along this section were found to be severely eroded (4 to 5 feet).



Description
Severe erosion of bank has also started to undercut trees.

Solution	Reduce Peak Flows, Stabilize Stream Bank
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POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA5 - BEA5	Comments
Municipality:	Philadelphia / Bensalem	This problem area was reported by the Philadelphia Water Department and the Township of Bensalem. The problem area is located to the east of the Franklin Mills Mall on Poquessing Creek. The reach was reported to as actively degrading and the bank erosion was classified as moderate.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

The banks along this section of stream were found to be severely eroded. Undercutting of trees and bank vegetation was also observed.



Description

The picture to the left shows bank undercutting and subsequent sloughing. Without proper mitigation, this process will continue and result in increased sediment transport downstream and a diminished riparian buffer.

Solution

Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA4 - BEA4	Comments
Municipality:	Philadelphia / Bensalem	This problem area was reported by the Philadelphia Water Department and the Township of Bensalem. The problem area is located to the east of Franklin Mills Mall on Poquessing Creek. The reach was reported to be actively degrading and the bank erosion was classified as moderate.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other - Obstruction / Dumping	



Description
Significant erosion was observed within this section of stream. Banks were also reported as being overgrown with invasive species. Carts from the Franklin Mills Mall and other trash have also accumulated in this area. A concrete wall that is jutting out into the stream, is redirecting flow which is contributing to erosion along the left bank.



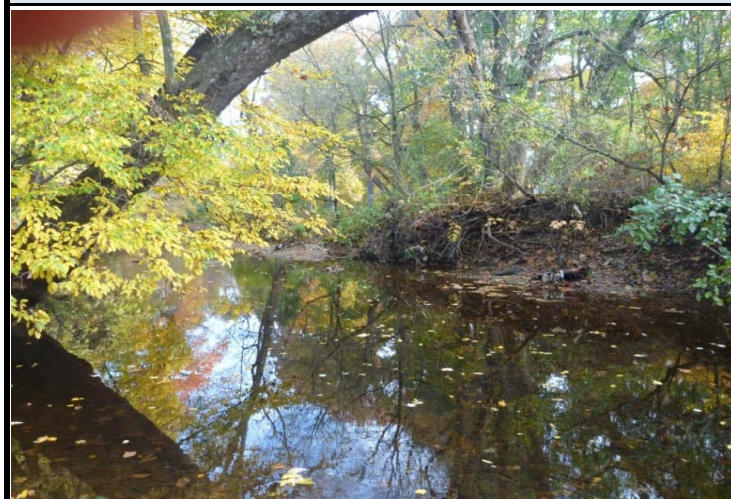
Solution

Cleanup Trash, Reduce Peak Flows, Stabilize Stream Bank, 5.4.2

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA13 - PHA14	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located to the east of Franklin Mills Mall on Poquessing Creek. The reach was reported to be actively degrading and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

Bank erosion measuring 5' to 6' was observed along this section of stream. Severe undercutting of the trees along the streambanks was also noted.



Description

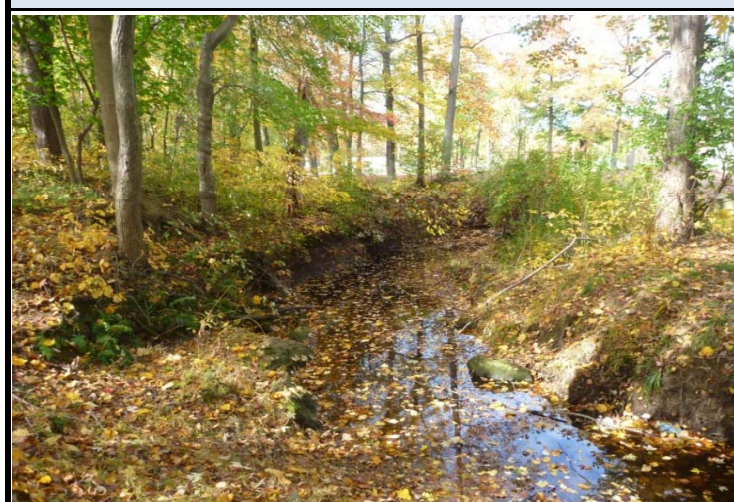
Solution

Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA46	Comments
Municipality:	Bensalem	This problem area was reported by the Philadelphia Water Department. The problem area is located to the west of Hulmeville Rd. along a tributary to Poquessing Creek. The reach was reported to be actively degrading and the bank erosion was classified as high.
Stream name:	Trib to Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

The tributary receives a high volume of runoff from a large residential area. This is likely causing the observed bank erosion. Bank erosion was measured to be approximately 3' to 4' high.



Description

Planting native vegetation along the stream will help stabilize the banks. To reduce volumes and rates of runoff, infiltration/detention basins would need to be constructed upstream.

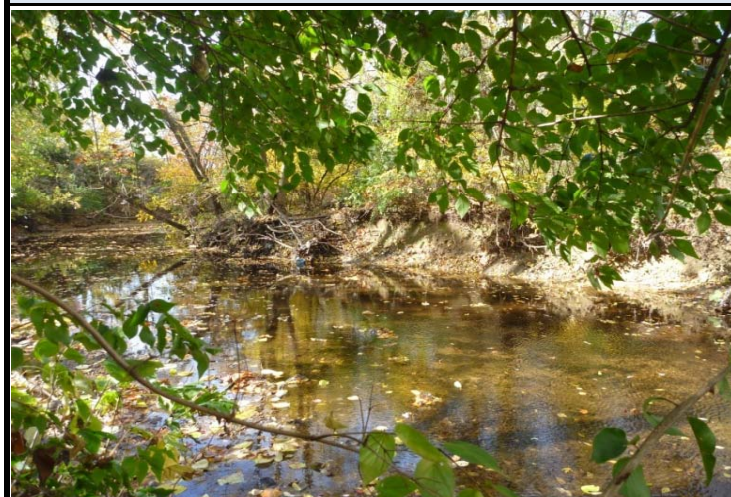
Solution

Reduce Peak Flows, Stabilize Stream Bank, 5.4.2, 6.6.2, 6.6.3, 6.4.2

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA12	Comments
Municipality:	Philadelphia / Bensalem	This problem area was reported by the Philadelphia Water Department. The problem area is located to the east of Woodhaven Rd on the Poquessing Creek. The reach was reported to be actively degrading and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description
Bank erosion is undercutting several large trees along the bank.




Description
Bank erosion was measured to be approximately 5 feet.

Solution	Reduce Peak Flows, Stabilize Stream Bank
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POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA3	Comments
Municipality:	Philadelphia / Bensalem	This problem area was reported by the Philadelphia Water Department. The problem area is located west of Woodhaven Rd. and north of Home Depot along the Poquessing Creek. The reach was reported as actively aggrading and the bank erosion was classified as moderate.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	

	Description
	The bank on the outside of the bend is being undercut. This is causing trees to uproot as seen in the photo. Sediment is being deposited along the inside of the channel.

	Description

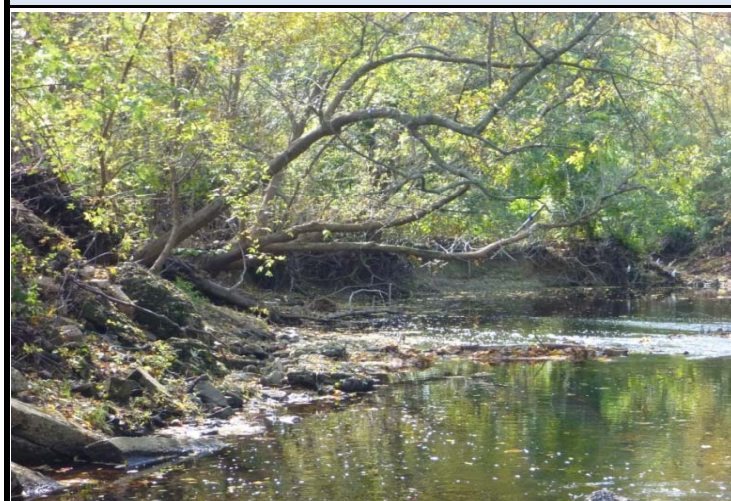
Solution

Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

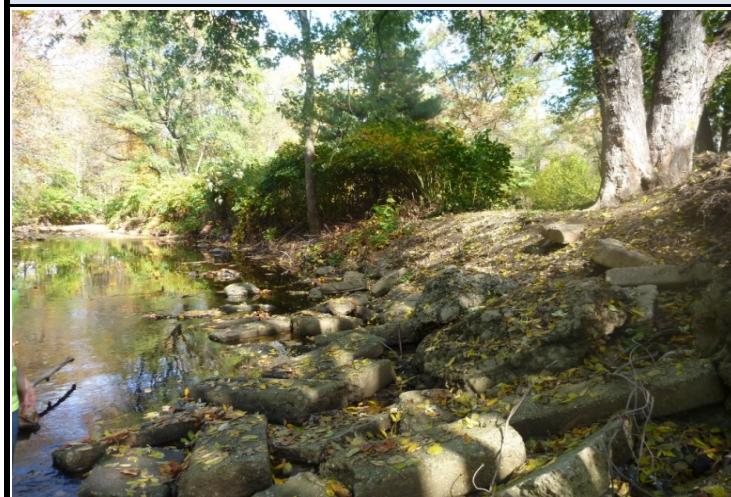
Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA2 - BEA3	Comments
Municipality:	Philadelphia / Bensalem	This problem area was reported by the Philadelphia Water Department and the Township of Bensalem. The problem area is located west of Woodhaven Rd and Home Depot along the Poquessing Creek. The reach was reported to be actively aggrading and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

Streambanks are severely undercut. Trees have started to lean inward towards the stream.



Description

Large rocks have been placed in this area to try to reduce bank erosion. The rock was not placed high enough and bank erosion is occurring above the rock.


Solution

Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA1	Comments
Municipality:	Philadelphia / Bensalem	This problem area was reported by the Philadelphia Water Department. The problem area is located on Poquessing Creek between Elwood Ave and Buttonwood Ave. The reach was reported to be actively aggrading and the bank erosion was classified as moderate.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
<div><div>1</div><div>Flooding</div></div> <div><div>2</div><div>Deficient Bridge/Culvert</div></div> <div><div>3</div><div>Erosion</div></div> <div><div>4</div><div>Sedimentation</div></div> <div><div>5</div><div>Water/Groundwater Pollution</div></div> <div><div>6</div><div>Other</div></div>		

	Description
	Stream banks are highly eroded. Litter in the tree branches provides an indication of higher flow levels. Bank erosion was measured to be 4' to 5' high.

	Description
	Bank is undercut which is causing trees to lean towards stream.

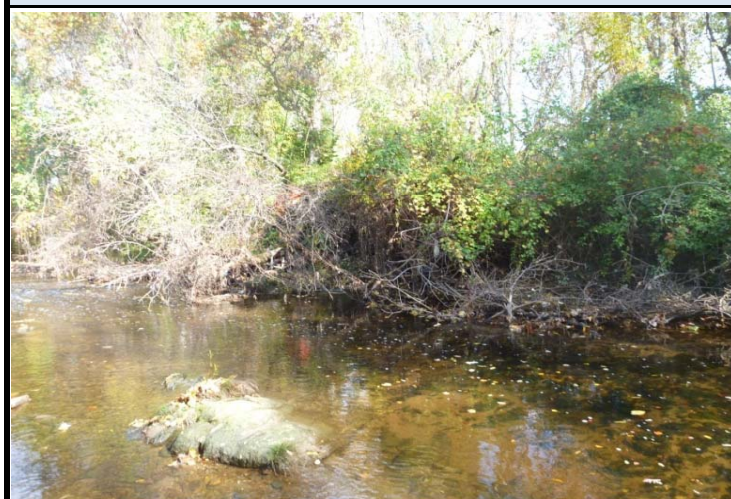
Solution

Remove Debris, Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	BEA2	Comments
Municipality:	Philadelphia / Bensalem	This problem area was reported by the Township of Bensalem. The problem area is located on Poquessing Creek between Frankford Ave/Bristol Pike (SR 13) and I-95.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description
Bank is eroded 4' to 5' and is severely undercut.



Description
Erosion is occurring along the outside of the stream bed where velocities are higher and sedimentation is occurring on the inside of the bed where velocities are lower..

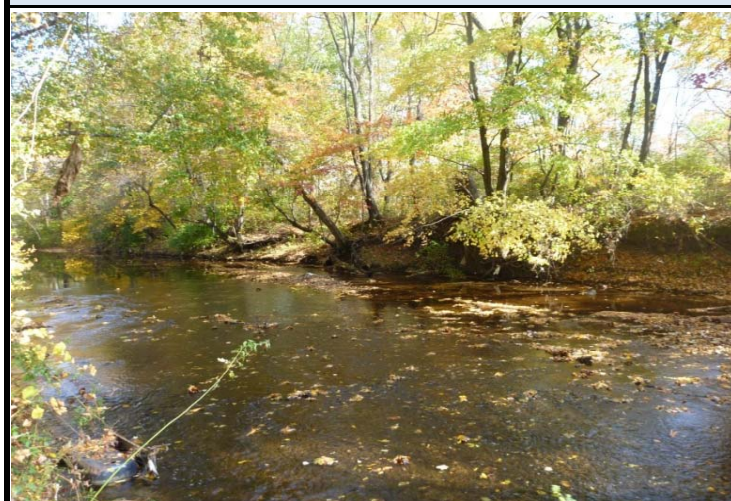
Solution

Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA10	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Poquessing Creek north of I-95 along Mill Rd. The reach was reported to be actively degrading and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

Undercutting of the bank is causing trees to lean towards stream. Continued erosion will cause these trees to fall into the stream. This will diminish the existing riparian buffer and cause additional obstructions within the stream channel.



Description

Bank erosion was estimated to be approximately 7' to 8'.

Solution

Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA9	Comments
Municipality:	Bensalem	This problem area was reported by the Philadelphia Water Department. The problem area is located on Poquessing Creek near the Grant Ave/ I-95 crossing. The reach was reported to be actively degrading and the bank erosion was classified as high.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

No major erosion was found as indicated on the municipal reporting form. Some debris accumulation was observed.



Description

Scour of the banks was measured to be less than one foot. This is due, in part, to there being no high banks to scour. The right bank is armored to prevent erosion and the left bank is low, allowing high flows to spread out.

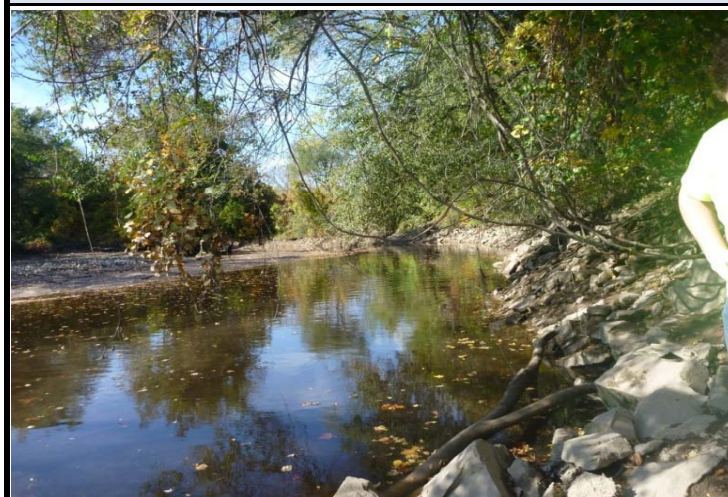
Solution

Remove debris and continued maintenance

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	BEA1	Comments
Municipality:	Philadelphia / Bensalem	This problem area was reported by the Township of Bensalem. The problem area is located on Poquessing Creek near its confluence with the Delaware River.
Stream name:	Poquessing Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

The right bank in the photo to the left is heavily armored and sediment deposits were observed along the left bank.



Description

High flows have eroded the bank above the wall.


Solution

Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA29	Comments
Municipality:	Philadelphia / Bensalem	This problem area was reported by the Philadelphia Water Department. The problem area is located on Byberry Creek west of Morrell Ave. and north Brook Ln. The reach was reported to be actively degrading and the bank erosion was classified as high.
Stream name:	Byberry Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	

	Description
	The bank in the photograph to the left has eroded 3' to 5' which is causing some trees to lean in towards stream.

	Description

Solution

Reduce Peak Flows, Stabilize Stream Bank, 5.4.2, 6.6.2, 6.6.3, 6.4.2

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA30	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Byberry Creek east of Chesterfield Rd on the property of Christ the King School. The reach was reported to be actively degrading and the bank erosion was classified as high.
Stream name:	Trib to Byberry Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description
3' to 4' of bank erosion was observed along this section of stream.




Description
Bank undercutting is exposing the root systems of trees and vegetation along the banks. Continued erosion will cause these trees to fall, thus diminishing the riparian buffer which is helping to protect the stream.

Solution	Reduce Peak Flows, Stabilize Stream Bank, 5.4.2, 6.6.2, 6.6.3
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POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA31	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located along Byberry Creek north of the intersection of Red Lion Rd. and Waldemire Dr. Bank erosion was classified as high.
Stream name:	Byberry Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other - Trash	

	Description
	Bank erosion measuring 5' to 6' jeopardizing the stability of trees and vegetation along the stream banks.

	Description
	Sediment accumulations, trash, and debris were also observed in this area.

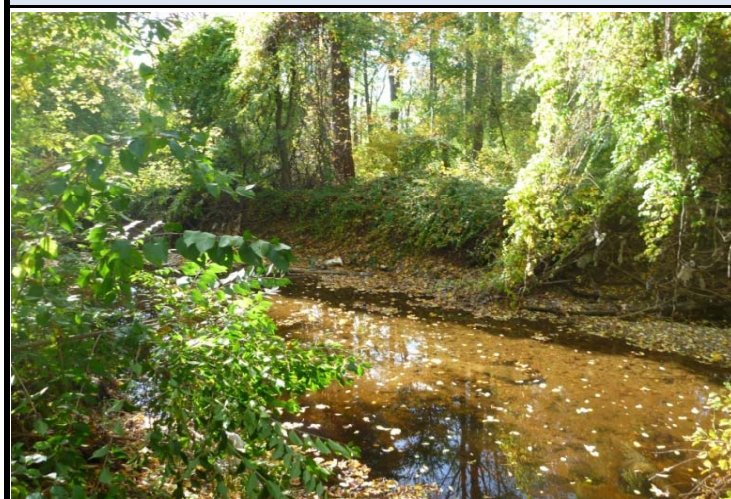
Solution

Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA32	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Byberry Creek west of Waldemire Dr. The reach was reported to be actively degrading and the bank erosion was classified as high.
Stream name:	Byberry Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

3' to 4' of bank erosion was observed along this section of stream.



Description

Non-native invasive vegetation was also found along the stream.

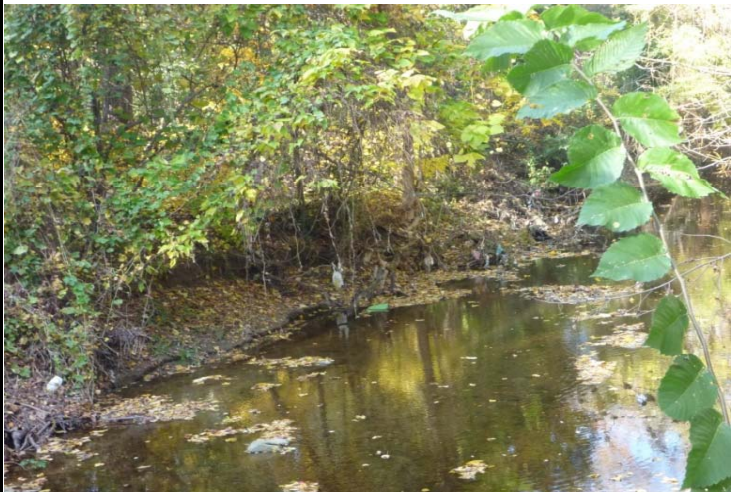
Solution


Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA33	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Byberry Creek, south of the intersection of Waldemire Dr. and Chalfont Dr. Bank erosion was classified as high.
Stream name:	Byberry Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	

	Description
	Bank erosion measuring 5' to 6' was observed in this area.

	Description
	The banks are well vegetated but continued erosion will diminish the riparian buffer which is currently helping to protect the stream.

Solution


Reduce Peak Flows, Stabilize Stream Bank, 5.4.2

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA34	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Byberry Creek, north of the intersection of Waldemire Dr. and Chalfont Dr. Bank erosion was classified as high.
Stream name:	Byberry Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	

	Description
	Severe erosion and bank undercutting was observed within this section of stream.

	Description
	A sandbar has formed on the inside of the right bank in this photo. Flow is diverted around this area, causing higher velocities and more erosion.


Solution

Remove Sandbar, Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA35	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Byberry Creek, south of the intersection of Waldemire Dr. and Fairdale Rd. The reach was reported to be actively degrading and the bank erosion was classified as high.
Stream name:	Byberry Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	

	Description
	Extreme bank erosion estimated to be 10' to 15' was observed in some areas. Severe undercutting has trees exposed and leaning towards stream.

	Description
	Many trees were found to have already fallen due to being undercut.

Solution

Clear Debris in Channel, Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA43	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Walton Run, south of the intersection of Comly Rd. and Academy Rd. Bank erosion was classified as high.
Stream name:	Walton Run	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other - Obstruction	



Description
Erosion has caused several trees to fall into the stream as a result of bank undercutting.




Description
3' to 4' of bank erosion was observed in this area.


Solution	Clear Debris in Channel, Reduce Peak Flows, Stabilize Stream Bank
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POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA44	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Walton Run, north of Academy Rd. near St Martha's School. Bank erosion was classified as high.
Stream name:	Walton Run	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	

	Description
	Erosion on both banks can be reduced by properly armoring and reducing volume.

	Description
	Severe bank erosion estimated to be 6' to 7' has exposed tree roots along the entire section of stream.

Solution

Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA40	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Walton Run, east of Drummond Rd. and north of Academy Rd. Bank erosion was classified as high.
Stream name:	Walton Run	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description
Several sediment deposits were observed in this section of stream.




Description
Bank erosion was estimated to be 5'.


Solution	Reduce Peak Flows, Stabilize Stream Bank
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POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA41	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Walton Run, east of Drummond Rd. Bank erosion was classified as high.
Stream name:	Walton Run	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	

	Description
	Bank undercutting in this area has caused trees to fall across the stream which obstructs and/or diverts flow in the main channel.

	Description
	3' to 4' of bank erosion was estimated in this area.

Solution

Clear Debris, Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA42	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Walton Run, south of Decatur Rd. Bank erosion was classified as high.
Stream name:	Walton Run	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

The photo to the left shows a section of stream where bank undercutting and subsequent sloughing has occurred.



Description

2' to 3' of erosion was estimated in this area. Erosion is starting to undercut the banks and expose tree roots.

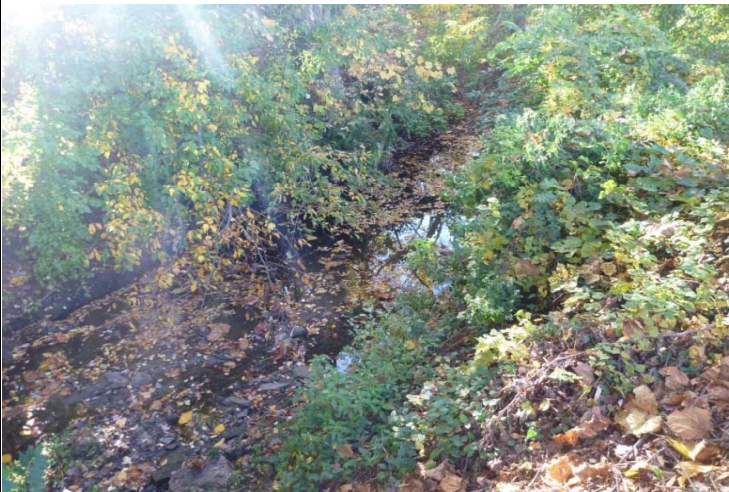
Solution


Reduce Peak Flows, Stabilize Stream Bank, 5.4.2

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA36	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Walton Run, southeast of the Red Lion Rd. and Roosevelt Blvd. (SR 63) intersection. Bank erosion was classified as high.
Stream name:	Walton Run	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other - Dumping	

	Description
	The business is dumping leaves along the stream edge. It looks as if they have done this for a while as the ground very "soft". The bank has approximately 1 foot of compressed leaves. These leaves will biodegrade and leach into the stream which can cause harm to aquatic plants and animals.

	Description
	The stream bed appears to be adequately stabilized in this area, but bank undercutting is a prevalent problem in this section of stream.

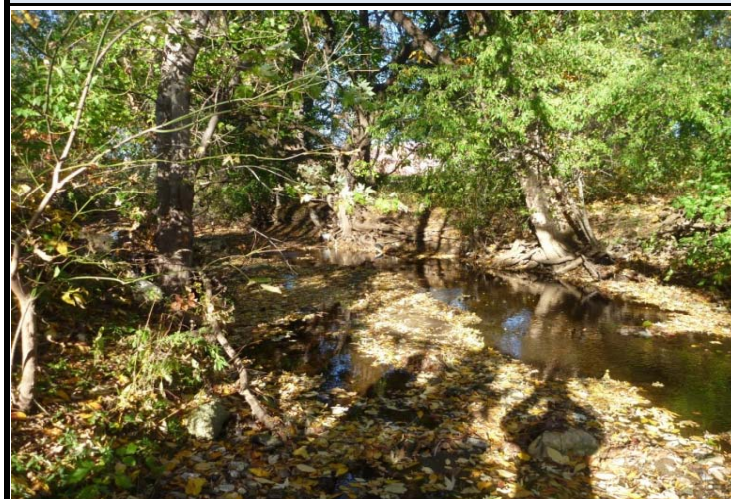
Solution

Clear Debris, Reduce Peak Flows, Stabilize Stream Bank

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA37	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Byberry Creek, west of the intersection between Academy Rd. and Roosevelt Blvd. (SR 63). Bank erosion was classified as high.
Stream name:	Byberry Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other - Trash	



Description
Bank erosion was estimated to be 3' to 4' in height.



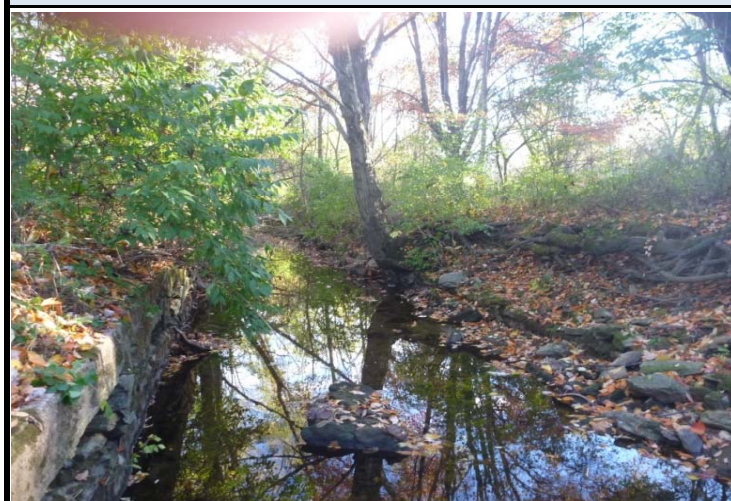
Description
Debris and trash accumulations were observed in this area. Trash is also caught in the limbs of tree branches which provides an indication of water levels during high flows events.

Solution	Reduce Peak Flows, Stabilize Stream Bank
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POQUESSING WATERSHED

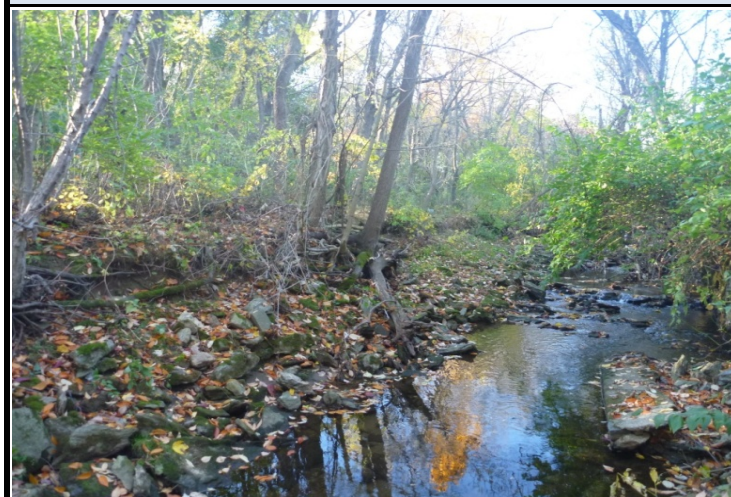
Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA38	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Byberry Creek, west of the intersection of Townsend Rd. and Southampton Rd. The reach was reported to be stable and the bank erosion was classified as high.
Stream name:	Byberry Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

The left bank in this photo has a stone wall that has helped to protect it from erosion. The right bank is unprotected and significant erosion has occurred.



Description

The main channel is very rocky which is helping to protect it from erosion, but higher flows are eroding the banks and exposing the root systems of vegetation along them.

Solution

Reduce Peak Flows, Stabilize Stream Bank, 5.4.2

POQUESSING WATERSHED

Poquessing Watershed Act 167 Problem Area Inventory

Problem Area - Map ID:	PHA39	Comments
Municipality:	Philadelphia	This problem area was reported by the Philadelphia Water Department. The problem area is located on Byberry Creek, east of the intersection of SR 1 and SR 63. Bank erosion was classified as high.
Stream name:	Byberry Creek	
Inspected By/Date:	DJS/BAK 10-28-2010	
Checked By/Date:	JMY 04-18-2011	
Type of Problem (highlighted):		
1	Flooding	
2	Deficient Bridge/Culvert	
3	Erosion	
4	Sedimentation	
5	Water/Groundwater Pollution	
6	Other	



Description

Significant erosion estimated at 3' to 4' in height is undercutting the banks in this section of Byberry Creek.



Description

Erosion is a prevalent problem in this section of stream. It is diminishing the riparian buffer and increasing sediment transport downstream.

Solution

Reduce Peak Flows, Stabilize Stream Bank, 5.4.2