



***Do Your
Downspouts
Lead To
The River?***

You Can Make a Difference

Why proper roof runoff is important

Downspouts carry storm water from your roof away from your house. Directing storm water from downspouts away from paved areas and to vegetated areas gives water the chance to enter the ground, instead of running into sanitary sewers or storm sewers.

By keeping storm water out of the sanitary or storm sewers:

- You Can reduce sewage overflows into the River
- You Can reduce flooding of the River
- You Can reduce basement flooding from sanitary sewers backups
- You Can reduce basement flooding from leaking downspout connections
- You Can lower sewer usage rates paid by the community and you
- You Can reduce water use for landscaping saving you money

Urbanization increases storm water flowing to the River

As areas become urbanized, the amount of permeable ground cover is reduced, and less storm water soaks into the ground. The resulting storm water runoff causes large increases in river flow and flooding. River banks erode and habitat for fish and wildlife is damaged.

Undeveloped Areas

- Large vegetated areas
- Slow runoff
- Few flooding events
- Minimal erosion



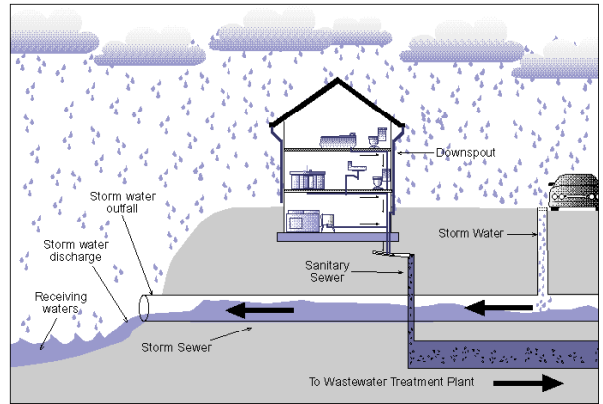
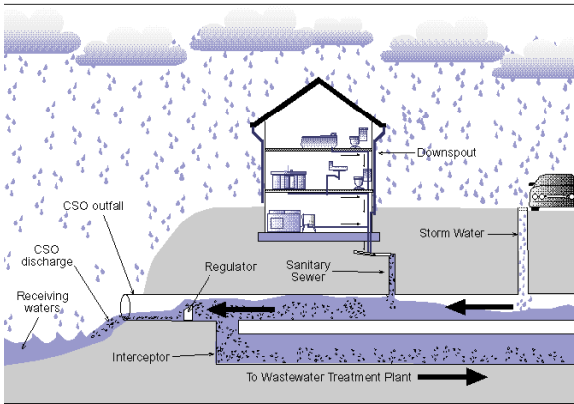
Developed Areas

- Impervious surfaces
- Rapid runoff
- Increased flooding
- Erosion of river bank



Inside is a description of how you can determine if your downspouts are connected to the sanitary sewer or in need of redirection.

How storm water reaches the River



Combined Sewer Systems

Some communities collect both storm water and sanitary wastewater in the same sewer. These are called "combined sewers". Sometimes, when it rains, combined sewers do not have enough capacity to carry all the storm water and wastewater to the treatment plant. In these situations the combined wastewater overflows untreated into a body of water, creating a combined sewer overflow (CSO). Disconnection or redirection of storm water coming from downspouts can reduce storm water entering the combined system, and help to reduce CSO's.

To find out if you live in a combined sewer area, contact your county or community leaders.

Separated Sewer Systems

Some communities collect storm water and sanitary wastewater in different sewers. These are called "separated sewers." When it rains or the snow melts, storm water flows over the land picking up pollutants such as fertilizers, pesticides, oil and grease from cars and bacteria from pet wastes. These pollutants then reach the river either directly or through storm sewers.

Redirection of storm water coming from downspouts to vegetated areas can reduce storm water entering the sewer system, preventing pollution and helping to reduce flooding by the river.

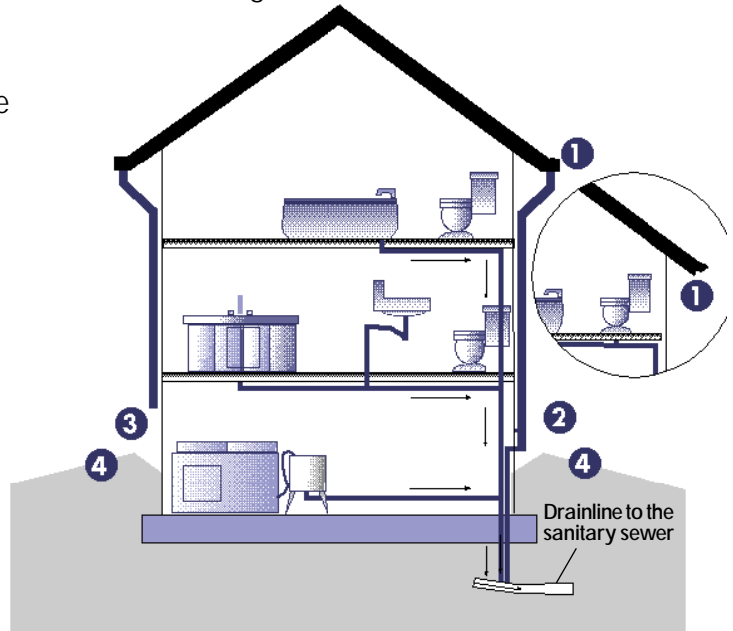
How does your roof drainage work?

Rain water that lands on your roof is collected in gutters and is discharged to the ground by downspouts. This rain water should be directed across vegetated areas where it can soak in.

Incorrect Roof Drainage

Incorrect Roof drainage may involve any of four problems:

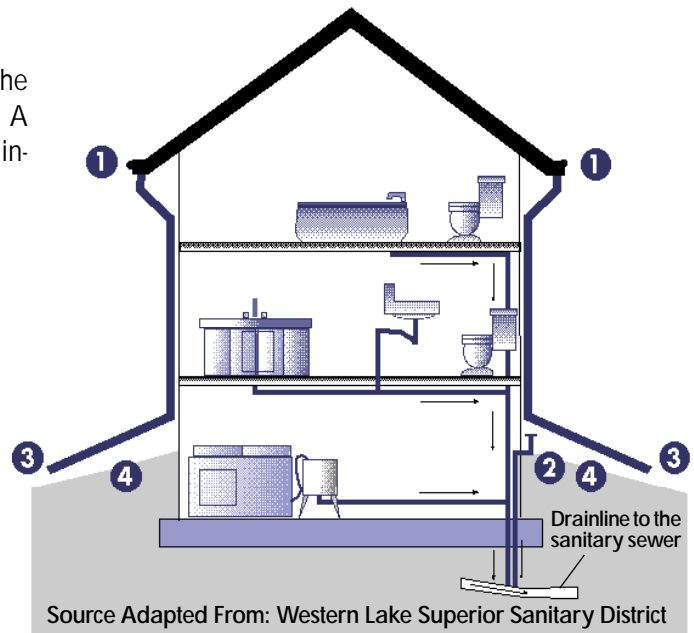
- 1 Lack of gutters at bottom edge of roof
- 2 Downspouts that drain directly into the sanitary sewer line
- 3 Downspouts that drain straight down and do not direct water away from the house
- 4 Grading in the yard that directs water toward the house



Correct Roof Drainage

You may need to correct one or all of the roof drainage problems listed above. A correct roof drainage system should include:

- 1 Gutters on the bottom edges of your roof
- 2 A plug in the sanitary sewer line where the down spout had been connected
- 3 Downspout extensions that drain roof water away from your house
- 4 Grading that provides gradual slope away from the house

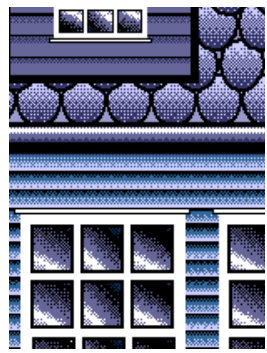


Source Adapted From: Western Lake Superior Sanitary District

Managing Storm Water on the Home Front

Reduce the amount of water reaching paved surfaces

Direct storm water from downspouts away from paved areas and onto vegetated areas. This will give the water a chance to enter the ground, instead of running into sanitary or storm sewers.



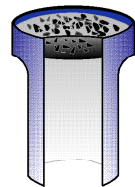
Rain Gutters should be installed at the lower edge of the roof line of the house to collect storm water and direct it to downspouts.



A, B, C's of Disconnection

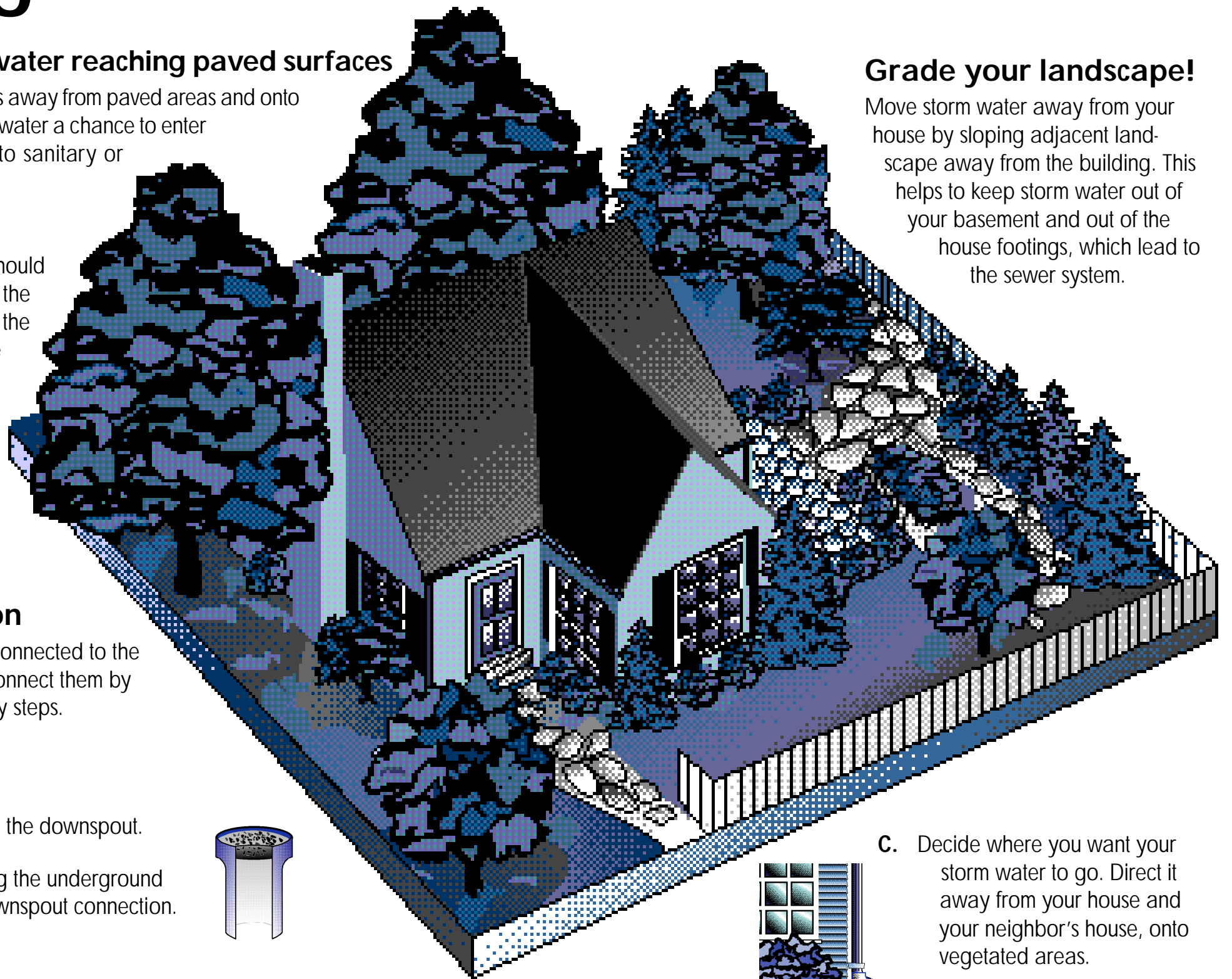
If downspouts are connected to the sewer like this, disconnect them by following these easy steps.

- A. Cut the downspout.
- B. Plug the underground downspout connection.

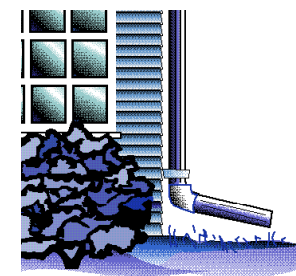


Grade your landscape!

Move storm water away from your house by sloping adjacent landscape away from the building. This helps to keep storm water out of your basement and out of the house footings, which lead to the sewer system.



- C. Decide where you want your storm water to go. Direct it away from your house and your neighbor's house, onto vegetated areas.



Your yard is connected to the river!

Fact: A 1,500 sq. ft. home can redirect 25,000 gallons of water each year away from the sewer system by disconnecting downspouts and redirecting storm water to vegetated areas.

Fact: Redirecting this storm water could save a community \$25 per year per house by not sending it to waste water treatment plants.

Fact: Disconnected, properly directed downspouts also help to reduce storm water runoff that causes the river to flood.

Fact: In combined sewer communities, disconnected downspouts help to reduce overflows of sewage into the river.

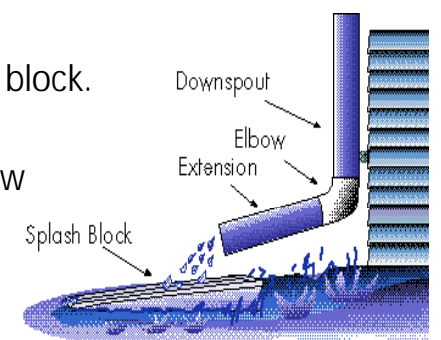
Fact: Grading landscaping away from the house can reduce water leaking into your basement.

Fact: Redirecting storm water from your roof can reduce tap water used for landscape needs, saving money each year!

Fact: A neighborhood of 100 homes can redirect 2.5 million gallons of water each year away from the sewer system by disconnecting downspouts and redirecting storm water to vegetated areas.

- D. Add elbow, extension and splash block.

- Insert downspout into elbow.
- Attach extension by fitting elbow inside the extension.
- Secure the elbow and extension with sheet metal screws.
- To prevent erosion where water drains, place a splash block at the end of the downspout extension.



Here are some questions to ask your community Department of Public Works

- How should I plug my underground downspout connection?
- How far away from my home should my downspout extension be?
- How far away from my property line should my downspout extension be?
- Are any innovative methods available to handle storm water from roofs, such as rain barrels?

Homeowners can make a difference !



Contact your local
community building
or public works
department for specific
disconnection
requirements.



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