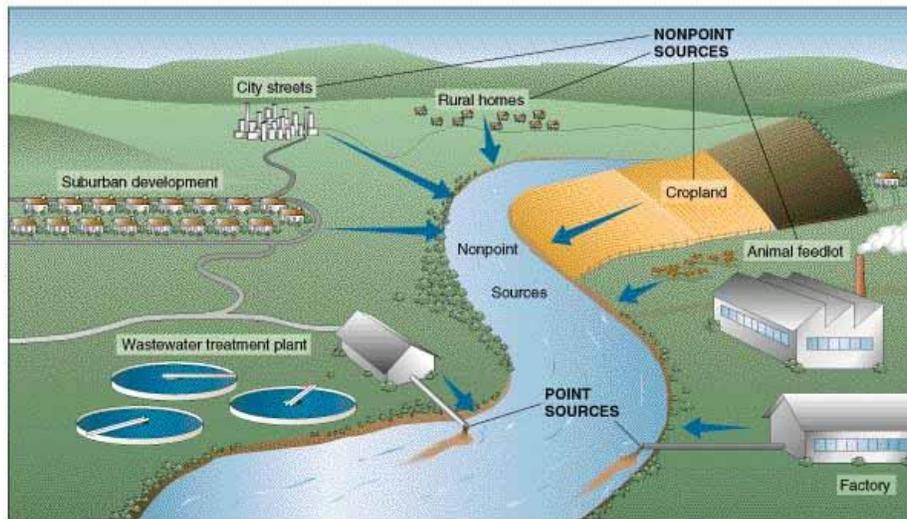


Stormwater Quality

The Clean Water Act has led to tremendous success in removing pollution in the nation's waterways from point sources. However, nonpoint source pollution remains a major problem. As defined by the Clean Water Act, a point source is "any discernible, confined and discrete conveyance...from which pollutants are or may be discharged," including pipes, ditches, tunnels, and wells. Industrial and sewage treatment plants represent the largest sources of point source discharges. Nonpoint source pollution, as the name suggests, refers to more diffuse sources of pollution—primarily pollution from runoff. As stormwater and snowmelt move over the ground, they pick up fertilizers, oil, grease, pesticides, bacteria from pet waste, and many other types of pollutants and deposit them into receiving waterways. This type of water quality impairment is more difficult to address than that from point sources due to its expansive nature, and thus remains one of the main sources of pollution today.



Point and nonpoint source pollution. Image courtesy of apesnature.homestead.com

To combat the threat and elusive nature of nonpoint source pollution, the EPA has turned to green infrastructure (GI) to help treat runoff. Green infrastructure is an effective pollution prevention option for nonpoint source pollution in several ways. The first stems from the GI principle of keeping runoff as close to its source as possible. This prevents stormwater from traveling and thus prevents it from picking up pollutants in the urban and rural environment. In addition to keeping flows localized, green infrastructure can also help treat runoff through vegetated practices. Trees and other vegetation—such as green roofs—can act as “bioremediators” that filter and break down pollutants, keeping them out of the soil and water¹. Root systems from trees and other vegetation also help anchor the soil, helping to keep excessive amounts of sediment from entering waterways.



Quick Resource

December 2013

Further reading and resources:

- <http://water.epa.gov/polwaste/nps/whatis.cfm>
- http://water.epa.gov/polwaste/nps/outreach/facts_index.cfm
- <http://www.pagnet.org/Home/tabid/766/Default.aspx>
- [http://www.forestry.gov.uk/pdf/urgp_benefits_of_green_infrastructure_main_report.pdf/\\$file/urgp_benefits_of_green_infrastructure_main_report.pdf](http://www.forestry.gov.uk/pdf/urgp_benefits_of_green_infrastructure_main_report.pdf/$file/urgp_benefits_of_green_infrastructure_main_report.pdf)

ⁱ "Benefits of Green Infrastructure," Forest Research, pp. 160-162
([http://www.forestry.gov.uk/pdf/urgp_benefits_of_green_infrastructure_main_report.pdf/\\$file/urgp_benefits_of_green_infrastructure_main_report.pdf](http://www.forestry.gov.uk/pdf/urgp_benefits_of_green_infrastructure_main_report.pdf/$file/urgp_benefits_of_green_infrastructure_main_report.pdf))



COLLEGE OF
AGRICULTURE
& LIFE SCIENCES

