

Background

The community of Creek Side, West Virginia needs you and your team to develop a plan that utilizes LID practices in order to reduce the use of traditional stormwater management practices. Your goal is to protect the local watershed by reducing nonpoint source pollution carried by stormwater runoff while improving the quality of life for the resident's and promoting stewardship of the environment.

Using the community site plans provided, develop the most environmentally effective stormwater management plan possible. When planning, be sure to take into account how the different LID practices and other BMPs function, their operation and maintenance requirements, cost, and ability to offset traditional stormwater practices.

Scenario

Your team has been brought in to review the plans for the construction of a large housing community. The stream adjacent to the property (Mary's Creek) has an impaired trout fishery and should be taken into consideration when planning LID practices. The developer has approved the plans and is ready to go forth with building as is; he has no experience utilizing LID practices. The current plan for managing stormwater is to build a system of ditches along the community's road system which will pipe the runoff into city storm drains near the south entrance by Team Ranch Road. There are also four conventional stormwater management practices planned for implementation (marked in **red** on the Google Map), two dry detention ponds and two wet ponds. The dry detention ponds are located in lots 45 off of Benet Court and lot A-10 off of Bella Terra Drive. Both are about ½ acre in size and are wet in the spring and fall making the home owners back yards unusable. The first wet pond is located in lot 2 at end of Sagrada Park and measures approximately ½ acre in size and the second is located in the center of Block 7 and takes up space on lots 4,5,6,10,11, and 12 with a total area of 1.3 acres.



You are restricted to using **10** LID practices. Choose your locations and practices carefully to allow for the best possible reduction in stormwater runoff. You also have permission to take up to three of the current lots to implement LID practices, if needed. If you decide to use a lot for stormwater management you must explain why you chose each lot.

1. **Create a demonstration for the developer that explains the benefits of utilizing LID practices.**
 - A. This should highlight the LID practices you chose and why.
 - B. Identify the limitations with the current stormwater management plan and the effects it will have on the environment.
 - C. Explain how your plan will reduce NPS pollution.
2. **Develop a strategy that incorporates the community and encourages them to be involved with their stormwater management plan.**
 - A. Illustrate how LID is used to manage stormwater and explain the pros and cons.
 - B. Explain the impacts urban sprawl has on nonpoint source pollution and how LID can be used to manage and reduce NPS pollution.
 - C. Provide examples of what individuals and the community can do to implement LID practices at home.



Additional questions to consider

1. If you could have only chosen 3 LID practices to utilize what would they have been, where would you have implemented them and why?
2. What do you believe to be the main limiting factors that stray developers and designers away from utilizing LID practices?
3. Name the top five benefits of utilizing LID practices, explain your answers.
4. Explain how LID can provide water quality benefits and provide several examples of where these practices have been implemented to improve water quality.

Submit your answers in the form of a power point presentation or paper. If you decide to write a paper you may mail it to the address below or attach it in an E-mail to: timothy.d.craddock@wv.gov.

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This scenario was developed by WVDEP's Stormwater Assistance Specialist in the Nonpoint Source Program. For more information go to: <http://www.dep.wv.gov/nonpoint>



