


6. Do you encourage clients or applicants to use runoff reduction or LID techniques in land development design. If so, which ones?		Response Count
		130
<i>answered question</i>		130
<i>skipped question</i>		70

### Comment

1. any and all that apply to their project
2. Some narrower streets and cluster development.
3. Yes, it depends on the project, but we do recommend minimizing storm sewer in favor of surface conveyances, infiltration BMP's instead of EDBs, and using porous pavement
4. MDCIA
5. Various
6. No
7. Do not have much interaction with clients, but I do promote it within the company on projects.
8. We try, however due to the cost for a lot of these applications we have not been able to use these techniques frequently. Porous pavement, PLD's, green roof
9. Yes, planning bmps
10. Project engineer usually encourages
11. Yes, anything I can.
12. no
13. PLD, EDB
14. I believe that we will be in the future.
15. N/A
16. Yes, we encourage the use of runoff reduction and LID. We do not specify what they can use, but encourage them to think outside the usual.
17. Yes, PLD, bio-swales and constructed wetlands are increasing in popularity over the standard EDB.
18. We have started talking with applicants in pre-application meetings and letting them know we are open to incorporating LID techniques in projects.
19. City Stormwater Engineering must per state on the 1 acre and larger development sites. We have a Land Development Technical Meeting where applicants as they get ready to submit plans are given feedback about their project. we offer encouraging information and techniques at this initial level.
20. Yes - Bioswales, reducing impervious surfaces.
21. all LID and high performance infrastructure techniques
22. rain gardens from roads, parking and rooftop. Green roof, Cisterns in other states. Greywater re-use.
23. Yes - we practice this in our park designs for the community I work in. As a project manager for a municipality I look for landscape architects and engineers that practice these

techniques.

24. All, including Cities, developers, residential
25. Yes -- but only in so much as in general we encourage and support LID techniques for planning efforts in our district.
26. Its an option, I wouldn't say we encourage it through our criteria. The decision is left to the designer
27. Given the opportunity, I would.
28. Yes, porous pavement, grass swales.
29. My work infrequently involves land development. However, we are encouraging it as a means of limiting or avoiding detention with Jefferson County at parking lots.
30. NA
31. N/A
32. If there is a benefit by reducing the WQCV requirement
33. Yes: Normally soft techniques such as swales and detention at source
34. No
35. All of the above.
36. yes
37. Bioswales, rain gardens, tree WQ filters,
38. Porous Landscape Detention
39. Our jurisdiction has not has good luck with LIDS after a test case use and does not encourage their use.
40. Please see response to question number 4.
41. no
42. Porous Pavement, Grass Swale
43. Yes, use most current and effective BMP's.
44. Grass swales and sand filters.
45. mostly we direct applicants to a references and let them decide what is applicable
46. No
47. N/A
48. Their choice
49. Sometimes
50. Yes... on every NEPA project... especially transportation related (i.e., new highways)
51. Yes; typically alternatives to hard surfaces (i.e., pervious/porous pavement)
52. Yes, porous pavement, swales, bioretention.
53. The Planning Departemtnt defers the matter to the Stormwater Utility
54. Yes. Parking lot sump islands with trees; constructed landscape detention with trees.
55. PLD,
56. Not very often.
57. General Runoff Reduction; 4 steps
58. Yes. Development clients in metro area and mountains.
59. No
60. Typically swales, buffers of PLDs
61. We talk about disconnected impervious. We suggest prorous pavement.
62. Yes, MDCIA, porous pavements
63. Yes, but not aggressively

64. Yes, but I work in a planning division in community development and we are not connected well to the LID process. We would like to be more involved.
65. when applicable yes, grass swales
66. No.
67. Yes. See above.
68. yes
69. Not typically.
70. yes, when possible
71. I only review grading and erosion control, but I believe that are development department recommends sand filter basins, porous pavement, grass buffers/swales, etc
72. Yes: minimize directly connected impervious areas
73. I will in the future - especially clustering, porous landscape, constructed wetlands & wetland channels, porous pavement
74. I've learned a bit about these things, but have no standards to enforce them. I also depend heavily on our development engineer to encourage these types of practices.
75. yes. anything that is possible to address on the specific sites (mostly grass swales, runoff conveyed thru landscaping area, EDB, collecting depressed areas for infiltration with underdrain)
76. If there is an overall benefit to the project (e.g. increased density of land use or reduction of construction costs), or if project is LEED, we will consider it.
77. Yes, we encourage the use of LID techniques. For upstream, offsite commercial development, we recommend using as little impervious surface as necessary. We also encourage the use of runoff models that estimate conservatively the amount of runoff volume being generated from the development.
78. Depends on the type of project. Very frequently there is no room or cost allowances for inclusion of LID techniques.
79. yes - City and County development review and planning staff
80. Yes - All techniques, except porous pavements and retention are still under review.
81. Yes. PLDs, tree filters, porous pavement (i.e., CBPs).
82. Yes -Any that are applicable to the site
83. We try to but most measures take up too much space or are too expensive to implement. If you want to see something other than a standard detention basin it'll need to be on the same order of cost.
84. MDCI
85. Yes. We don't specify which techniques, just strongly encourage any LID technique.
86. No, generally I am not involved in site planning.
87. no, not conducive with other improvements and the developers want every single SF for sale.
88. Putting breaks in landscape island curbs to allow runoff to enter the island instead of routing flow around them.
89. No, because site layout is done by professional planners not engineers. It will have to be required by review agencies before they are implemented on a wide scale due to the extra cost/loss of saleable land in the same way that detention ponds are required now by review agencies.
90. No
91. Which LID is recommended depends on the site. I think all are applicable in the right place
92. Yes, green roofs, bioswales, PLDs
93. Porous landscape rain garden

94. We do not design, applicants for proposed developments do that. We do recommend using longer grassy swales and such to increase pervious % and time of concentration. Onsite use of runoff must be balanced with Colorado Water Law which states that downstream users are entitled to historic rates of runoff.
95. We encourage grass buffers between down spouts and inlets. We try to encourage disconnected impervious area, however Colorado Springs developers still have a 1980's mentality.
96. We are currently trying to increase the frequency of these techniques in our designs.
97. grass swales, disconnected impervious areas,
98. no
99. Occasionally - the opportunity does not present itself, there are usually other concerns that override the development and it only becomes a topic of discussion when regulations require it.
100. Would like to more.
101. I encourage LID concepts, but owners typically just want to use a pond for simplicity and low design/construction costs, especially around type C and D soils.
102. Yes, see checked practices on question #5
103. Yes, Porous Landscape Detention
104. grass buffer and porous (gravel or rock) pavements. All the ones that rely solely on flow through a porous media fail by plugging.
105. If they are cost effective.
106. Yes, Bio swales, bio retention ponds, porous pavers
107. Green roofs, porous pavement, rain gardens and porous landscape detention.
108. I do not as I do not think your criteria addresses the real runoff concerns nor do I think that many of your standards are effective.
109. I try, but if the City makes it difficult, then we go with standard methods they easily accept.
110. Encourage - yes. Is that encouragement working so far - no.
111. WQCV
112. we are typically the client
113. Yes, as practical.
114. Yes. We encourage MDCIA through grass buffers, swales, porous pavements, etc. The Planning and Bldg. Dep'ts are still somewhat reluctant to allow use of green roofs due to the "dry climate" of Colorado.
115. porous pavement
116. na
117. NO
118. N/A
119. N/A
120. No, do not know anything about LID.
121. Yes, however this issue is driven by cost. I think it can be mandated based through the PUD process.
122. Unless supported by the geotechnical report, we cannot legally implement these techniques. We have occasionally recommended porous pavement, but to date, no projects have elected to implement it.
123. I currently encourage the use of grass swales.
124. Have not actively encouraged developers to use these techniques, but will be doing more in the future.

- 125.** Any of the techniques, however, the developer has to be on board with the variation of the "standard" development and willing to meet the challenges of long-term maintenance
- 126.** Yes. All CLients
- 127.** No
- 128.** Yes, Porous pavement and permeable pavers. Also see some green roofs being submitted.
- 129.** somewhat with PLDs. Very limited with other methods.
- 130.** Yes - all applicable Vol.3 BMPs