

Ordinance Checklist for LID Stormwater Site Planning and Design Techniques

The Ordinance Checklist for LID allows a community to determine what specific LID site planning and design techniques they have adopted or may need to adopt to avoid and reduce the stormwater impacts from new development and redevelopment. The checklist is organized by two broad goals and six objectives that are required by the *Rhode Island Stormwater Design and Installation Standards Manual*. Below each objective are specific LID site planning and design techniques that can be incorporated into existing community ordinances to achieve the objective. For more information, detailed design standards, and case studies regarding each technique refer to the *RI Community LID Site Planning and Design Guidance Manual*. Points are awarded for adopting specific LID site planning and design techniques into local ordinances. Therefore by using this checklist communities can determine how well they are doing to encourage LID.

GOAL: Avoid the impacts of development to natural features and pre-development hydrology.

Objective I: *Protect as much undisturbed open space as possible to maintain pre-development hydrology and allow precipitation to naturally infiltrate into the ground.*

1. Has Conservation Development been adopted to protect open space and pre-development hydrology? (This will also help to comply with objectives II and III below. Therefore adopting this technique is worth the most points.)
If you adopted conservation development you get 4 points.
If you adopted cluster development you get 2 points.
(Conservation development requires a site design process that avoids impacts so it gets more points than cluster)

2. Are limits of disturbance required to be marked on all construction plans?
If your answer is yes you get 1 point

Objective II: *Maximize the protection of natural drainage areas, streams, surface waters, wetlands, and jurisdictional wetland buffers.*

3. Do regulations require or encourage new lots to be created out of freshwater and/or coastal wetland jurisdictional areas, to the extent practicable?
If your answer is yes you get 1 point

4. Do regulations direct building envelopes away from steep slopes, riparian corridors, hydric soils, and floodplains, to the extent practicable?

If your answer is yes you get 1 point

5. Has a community buffer program been created to establish a naturally vegetated buffer system along all streams and wetlands to supplement and expand upon the minimum requirements of the DEM and CRMC programs, where applicable?

If you require vegetated buffers to supplement or expand upon DEM and/or CRMC programs you get 1 point.

If you require vegetated buffers to be restored, to the extent practicable, for redevelopment projects you get 1 point.

Objective III: Minimize land disturbance, including clearing and grading, and avoid areas susceptible to erosion and sediment loss.

6. Has your community adopted an erosion and sedimentation control ordinance?

If your answer is yes you get 1 point

7. Did your community adopt a grading ordinance to require applicants to maintain as much natural vegetation as possible and limits clearing, grading and land disturbing activities to the minimum needed for construction maintenance and emergency services?

If your answer is yes you get 1 point

If you adopted clearing and grading requirements as part of your soil erosion ordinance you get 1 point

8. Has your community adopted a forest cover, tree protection, or tree canopy ordinance?

If your answer is yes you get 1 point

Objective IV: Minimize soil compaction and restore soils compacted as a result of construction activities or prior development.

LID site planning and design techniques 2, 6 and 7 above help to address this objective. If you adopted 2, 6 or 7 you get 1 bonus point for each technique.

GOAL: Reduce the impacts of land alteration to decrease stormwater volume, increase groundwater recharge and minimize pollutant loadings from a site.

Objective V: *Provide low-maintenance, native vegetation that encourages retention and minimizes the use of lawns, fertilizers, and pesticides.*

9. Have LID landscaping standards been adopted that require the preservation of as much natural vegetation as possible and encourage low-maintenance native landscaping?

If your answer is yes you get 1 point

Objective VI: *Minimize impervious surfaces*

10. Did your community adopt compact growth ordinances such as conservation development or mixed use planned development? Both are very effective at reducing impervious surfaces so they get the most points.

If you adopted a mixed use compact development ordinance you get 2 points.

If you adopted conservation or cluster development you get 2 points.

11. Are residential streets required to be as narrow as possible to accommodate traffic volumes without compromising safety?

If you require road widths of 22 feet or less for subdivisions of 40 or fewer homes or average daily trips less than 400 you get 1 point

If you require road widths of 26 feet or less for subdivisions of 40-200 homes or average daily trips of 400-2,000 you get 1 point

12. Are street right-of-way widths required to be the minimum width needed to safely accommodate travel lanes, pedestrians and vegetated open swales?

If you require a right-of-way less than 45 you get 1 point

13. Driveway lengths and widths are required to be reduced to the extent possible, pervious surfaces and shared driveways are encouraged wherever appropriate?

If you require driveways to be 9 feet or less (one lane) and 18 feet or less (two lanes) you get 1 point

If pervious surfaces can be used for residential driveways you get 1 point

If shared driveways can be used in residential developments you get 1 point

14. Are curbs in residential streets **not** required, where possible, to allow side of the road drainage into vegetated open swales.

If your answer is yes you get 2 points

15. Have flexible sidewalk design standards been adopted that limit impervious cover.

If the minimum sidewalk width is 4 feet or less you get 1 point

If you don't require sidewalks on both sides of the road you get 1 point

If sidewalks are required to be gently sloped so they drain into the front yard rather than the street you get 1 point.

If alternative pedestrian access can be used instead of sidewalks such as trails or unpaved footpaths you get 1 point

16. Did your community modify the dimension, design, and surface material of cul-de-sacs to reduce total impervious cover?

If the minimum radius allowed for cul-de-sacs is less than 35 you get 2 points.

If the minimum radius allowed for cul-de-sacs is 36-45 feet you get 1 point.

If a landscaped island or native vegetation can be within the cul-de-sac you get 1 point.

If alternative turn arounds are allowed such as hammerheads or tees you get 1 point.

17. Have both minimum and maximum parking ratios been adopted to provide adequate parking while reducing excess impervious cover?

If you have minimum and maximum parking ratios you get 1 point

If you allow pervious materials to be used for parking areas or overflow parking you get 1 point

If parking ratios are reduced because mass transit is nearby you get 1 point

18. Is shared parking encouraged and implemented wherever feasible in order to reduce total impervious cover?

If shared parking is allowed you get 2 points.

19. Are off-site parking allowances allowed to accommodate re-development and mixed use compact growth?

If off-site parking is allowed/encouraged you get 2 points.

20. Are parking stalls and aisles were reduced to the extent feasible in order to decrease total impervious cover?

If the minimum stall dimensions are 9 feet wide by 18 feet long you get 1 point

If 20% or more of the parking lot is required to have smaller dimensions (8 feet by 16 feet) for compact cars you get 1 point

21. Are parking lot landscaping requirements flexible and encourage LID techniques?

If parking lots of 10 or more spaces, require that 10% of parking lot area be dedicated to landscaped areas that can include LID stormwater practices, you get 1 point

If landscaping is required within parking areas that “breaks up” pavement at fixed intervals, you get 1 point.

If 25-30% tree canopy coverage over on-site parking lots are required you get 1 point.

22. Have impervious cover limits been adopted to reduce impervious cover on a community basis?

If you adopted impervious cover limits to stay below 10% impervious cover for your community or undeveloped portions of your community you get 2 points.

If you adopted impervious cover limits greater than 10% but still reduce imperious cover from pre-existing development you get 1 point.

Total points possible for avoid the impacts are: 16

Your Score _____

Total points possible for reduce the impacts are: 37

Your Score _____

Total Points possible are: 53

Your Score _____