

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Barrington	Bristol	Burrillville (Harrisville)	Central Falls	Charlestown	Coventry	Cranston
GOAL: Avoid the impacts of development to natural features and pre-development hydrology.							
Objective I: <i>Protect as much undisturbed open space as possible to maintain pre-development hydrology and allow precipitation to naturally infiltrate into the ground.</i>							
1. Has Conservation Development been adopted to protect open space and pre-development hydrology?	No	Yes	Yes	No	No	Yes	Yes
2. Has a transfer of development rights ordinance been adopted to provide an incentive for landowners to preserve natural lands?	No	No	No	No	No	No	No
3. Are limits of disturbance required to be marked on all construction plans?	Yes	Yes	Yes	Yes	Yes	Yes	No
4. Are there limits on lawn area for residential lots to protect open space?	Yes	No	Yes	Yes	No	No	No
5. Are undisturbed vegetative areas required on new lots as visual screens?	Yes	No	Yes	Yes	Yes: Only for cluster subdivisions	Yes	No
Objective II: <i>Maximize the protection of natural drainage areas, streams, surface waters, wetlands, and jurisdictional wetland buffers.</i>							
6. Do regulations require or encourage new lots to exclude freshwater and /or coastal wetland jurisdictional areas, to the extent practicable?	Yes	Yes	Yes	Yes	Yes	Yes	No
7. Do regulations direct building envelopes away from steep slopes, riparian corridors, hydric soils, and floodplains, to the extent practicable?	Yes	Yes	Yes	Yes	No	Yes	No
8. Has a community buffer program been created to establish or restore a naturally vegetated buffer system along all surface waters and wetlands to supplement and expand upon the minimum requirements of the DEM and CRMC programs, where applicable?	Yes	No	No	No	Yes	No	No
9. Are zoning setback distances flexible in residential districts to avoid requiring house lot locations to be unnecessarily close to surface waters, wetland, and riparian corridors?	No	No	Yes	Yes	No	No	No

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Low Impact Development Objectives	Barrington	Bristol	Burrillville (Harrisville)	Central Falls	Charlestown	Coventry	Cranston
Objective III: Minimize land disturbance, including clearing and grading, and avoid areas susceptible to erosion and sediment loss.							
10. Has your community adopted an erosion and sediment control ordinance?	Yes	Yes	Yes	No	No	Yes	Yes
11. Did your community adopt a grading ordinance to require applicants to maintain as much natural vegetation as possible and limit clearing, grading, and land-disturbing activities to the minimum needed for construction maintenance and emergency services?	No	No	No	No	No	No	No
12. Has your community adopted a forest cover, tree protection, or tree canopy ordinance?	No	No	No	No	Yes	No	No
13. Do you require permits before removing trees on new or re-development sites?	No	No	No	No	No	No	No
14. Have minimum tree preservation standards been established for new development?	No	No	No	Yes	No	No	No
15. Do capital improvement plans include tree planting as part of project budgets?	No	Yes	Yes	No	No	No	No
16. Do you require that public trees removed or damaged during construction be replaced with an equivalent amount of tree diameter? (for example, if a 24-inch diameter tree is removed it should be replaced with six four-inch diameter trees).	No	No	No	Yes	Yes	No	No
Objective IV: Minimize soil compaction as a result of construction activities or prior development.							
17. Have you adopted provisions within land development regulations that prohibit the compaction of soils in areas needed for stormwater recharge?	No	No	No	Yes	No	No	No
18. Have you adopted requirements for construction site inspections to ensure that soils are not compacted?	No	No	Yes	Yes	No	No	No
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.							
19. Have LID landscaping standards been adopted that require the preservation of as much natural vegetation as possible and encourage low-maintenance native landscaping?	No	No	No	Yes	Yes	Yes	Yes
Objective VI: Minimize impervious surfaces.							
20. Did your community adopt compact growth ordinances such as conservation development, planned development, or mixed use development?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21. Has your community identified growth centers where increased density is appropriate and encouraged?	Yes	Yes	Yes	Yes	Yes	Yes	Yes

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Low Impact Development Objectives	Barrington	Bristol	Burrillville (Harrisville)	Central Falls	Charlestown	Coventry	Cranston
22. Are residential streets required to be as narrow as possible to accommodate traffic volumes without compromising safety?	No	No	Yes	N/A	Yes	No	No
22A. Do you require road widths of 22 feet or less for subdivisions of 40 or fewer homes or average daily trips less than 400?							
22B. Do you require road widths of 26 feet or less for subdivisions of 40-200 homes or average daily trips of 400-2,000?	NA	No	N/A	N/A	Yes	No	No
23. Are street right-of-way widths required to be less than 45 feet?	No	No	Yes	No	No	No	No
24. Are driveway lengths and width required to be reduced to the extent possible with pervious surfaces and shared driveways encouraged wherever appropriate?	No	No	No	N/A	No	No	No
24A. Do you require driveways to be nine feet or less (one lane) and 18 feet or less (two lanes)?							
24B. Do you allow pervious surfaces to be used for residential driveways?	Yes	Yes	Yes	N/A	Yes	Yes	No
24C. Do you allow shared driveways to be used in residential developments?	Yes	Yes	Yes	Yes	Yes	Yes	No
25. Do you allow the flexibility with curbs in residential streets to encourage side-of-the-road drainage into vegetated open swales,, where possible?	Yes	Yes	Yes	N/A	Yes	Yes	Yes
26. Where curbs are needed, do you allow opening in curbs that allow runoff to flow into swales?	Yes	Yes	Yes	N/A	Yes	Yes	No
27. Have flexible sidewalk design standards been adopted to limit impervious cover?	No (4.5 ft)	No	No: American Disabilities Act req'mts	Yes	N/A	Yes	No: American Disabilities Act req'mts
27A. Is the minimum sidewalk width four feet or less?							
27B. Do you require sidewalks on one side of the street only in low-density neighborhoods?	Yes	Yes	Yes	No	N/A	Yes	No
27C. Are sidewalks required to be gently sloped so that they drain into the front yard rather than the street?	No	No	No	N/A	N/A	No	No
27D. Can alternative pedestrian access such as trails or unpaved footpaths be used instead of sidewalks?	No	No	Yes	Yes	Yes	Yes	Yes
27E. Can pervious surfaces be used for sidewalks?	No	No	Yes	No	No	No	No
28. Did your community modify the dimension, design, and surface material of cul-de-sacs to reduce total impervious cover?	No (50 ft)	Yes	Yes	No	No	No	No
28A. Is the minimum radius allowed for cul-de-sacs less than 45 feet?							
28B. Can a landscaped island or native vegetation be within the cul-de-sac?	Yes	Yes	Yes	Yes	Yes	Yes	No
28C. Are alternative turnarounds allowed such as hammerheads or tees?	Yes	Yes	Yes	No	Yes	Yes	Yes
29. Have both minimum and maximum parking ratios been adopted to provide adequate parking while reducing excess impervious cover?	Yes	Yes	No	N/A	No	No: Min. but no maximum	No

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Low Impact Development Objectives	Barrington	Bristol	Burrillville (Harrisville)	Central Falls	Charlestown	Coventry	Cranston
30. Do you allow pervious materials to be used for parking areas and overflow parking?	Yes	Yes	Yes	Yes	N/A	Yes	No
31. Are parking ratios reduced if the site is served by mass transit or has good pedestrian access?	No	Yes	Yes	Yes	No	Yes	No
32. Is shared parking encouraged and implemented wherever feasible in order to reduce total impervious cover?	No	Yes	Yes	N/A	Yes	Yes	Yes
33. Do off-site parking allowances exist to accommodate re-development and mixed-use compact growth?	Yes	Yes	Yes	N/A	Yes	No	No
34. Are parking stalls and aisles reduced to the extent feasible in order to decrease total impervious cover?	Yes	No	Yes	Yes	Yes	Yes	No
34A. Are the minimum stall dimensions nine feet wide by 18 feet long?							
34B. Is 20% or more of the parking lot required to have smaller dimensions (8 feet by 16 feet) for compact cars?	No	Yes	No	No	No	No	No
35. Are parking lot landscaping requirements flexible and do they encourage LID techniques?	No	No	No	No	Yes	Yes	Yes
35A. Do parking lots of ten or more spaces require that 10% of the parking lot area be dedicated to landscaped areas that can include LID stormwater practices?							
35B. Is landscaping required within parking areas to "break up" pavement at fixed intervals?	Yes	Yes	No	Yes	Yes	Yes	Yes
35C. Is a 25-30% tree canopy coverage over on-site parking lots required?	No	No (20%)	No	No	Yes	No	No

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Low Impact Development Objectives	Barrington	Bristol	Burrillville (Harrisville)	Central Falls	Charlestown	Coventry	Cranston
36. Have impervious cover limits been adopted to reduce impervious cover on a community or partial-community-basis?	Yes (65%)	No	No: No limits have been established, but are encouraged during the planning process	No	No	Yes	No
GOAL: Manage the impacts at the source.							
Objective VII: Infiltrate precipitation as close as possible to the point it reaches the ground using vegetated conveyance and treatment systems.							
37. Have you amended regulations to require all development projects comply with LID pursuant to the <i>Rhode Island Stormwater Design and Installation Standards Manual</i> ?	No	Yes	Yes	No	Yes	No	Yes
38. Have you revised regulations to allow and encourage LID vegetated treatment systems such as bioretention, swales, and filter strips to promote recharge and the treatment of runoff?	No	Yes	Yes	No	Yes	No	Yes
Objective VIII: Break up or disconnect the flow of runoff over impervious surfaces.							
39. Have you amended regulations to encourage runoff to be diverted over pervious surfaces to foster infiltration, runoff reduction, and pollutant removal, where appropriate?	No	Yes	Yes	Yes	No	No	Yes
Objective IX: Provide source controls to prevent or minimize pollutants in stormwater.							
40. Do you encourage or require appropriate pet waste disposal to prevent pet waste from entering stormwater runoff?	No	Yes	Yes	No	No	Yes	No
41. Are commercial and industrial developments required to sweep their impervious areas on an annual basis?	No	No	No	No	No	No	No
42. Is street sweeping done regularly on community streets to limit pollutant transport to waterbodies and reduce maintenance of catch basins?	Yes	Yes	Yes	Yes	No	Yes	Yes
43. Are community road salt storage piles covered?	Yes	Yes	Yes	No	Yes	Yes	Yes

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Low Impact Development Objectives	Barrington	Bristol	Burrillville (Harrisville)	Central Falls	Charlestown	Coventry	Cranston
44. Has a community wastewater management district been adopted to encourage or require all onsite wastewater treatment systems be inspected and maintained regularly?	N/A	Yes	No	N/A	Yes	No	No
45. Have you adopted a stormwater utility district to manage the existing impacts of stormwater runoff?	No	No	N/A	No	No	No	No
Objective X: <i>Re-vegetate previously cleared areas to help restore groundwater recharge and pollutant removal.</i>							
46. Have regulations been adopted to encourage re-vegetation with native species, where possible?	No	No	No: Encouraged during planning process and reviewal	No	Yes	Yes	No

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Low Impact Development Objectives	Cumberland	East Greenwich	East Providence	Exeter	Foster	Glocester (Chepachet)	Hopkinton
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?	Yes	No	No	Yes	No	Yes	No
2. Has a transfer of development rights ordinance been adopted to provide an incentive for landowners to preserve natural lands?	No	No	No	Yes	No	No	No
3. Are limits of disturbance required to be marked on all construction plans?	Yes	Yes	Yes	No	Yes	Yes	No
4. Are there limits on lawn area for residential lots to protect open space?	No	Yes	No	No	No	No	No
5. Are undisturbed vegetative areas required on new lots as visual screens?	Yes: Only when commercial or industrial abut residential developments	Yes	Yes	Yes	Yes: Only when commercial or industrial abut residential development	Yes	No
Objective II: Maximize the protection of natural drainage areas, streams, surface waters, wetlands, and jurisdictional wetland buffers.							
6. Do regulations require or encourage new lots to exclude freshwater and /or coastal wetland jurisdictional areas, to the extent practicable?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7. Do regulations direct building envelopes away from steep slopes, riparian corridors, hydric soils, and floodplains, to the extent practicable?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8. Has a community buffer program been created to establish or restore a naturally vegetated buffer system along all surface waters and wetlands to supplement and expand upon the minimum requirements of the DEM and CRMC programs, where applicable?	No	No: Require buffers to be maintained but not usually beyond the state requirements	No	No	Yes	No	No
9. Are zoning setback distances flexible in residential districts to avoid requiring house lot locations to be unnecessarily close to surface waters, wetland, and riparian corridors?	No	Yes	Yes	No: Only via 2BR for lots of record. Planning board has been flexible in new subdivisions	No	No	Yes

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Low Impact Development Objectives	Cumberland	East Greenwich	East Providence	Exeter	Foster	Glocester (Chepachet)	Hopkinton
Objective III: Minimize land disturbance, including clearing and grading, and avoid areas susceptible to erosion and sediment loss.							
10. Has your community adopted an erosion and sediment control ordinance?	Yes	Yes	Yes	Yes	Yes	Yes	No
11. Did your community adopt a grading ordinance to require applicants to maintain as much natural vegetation as possible and limit clearing, grading, and land-disturbing activities to the minimum needed for construction maintenance and emergency services?	No	Yes	Yes	No	No	No	No
12. Has your community adopted a forest cover, tree protection, or tree canopy ordinance?	No	Yes	No	No	No	No	No
13. Do you require permits before removing trees on new or re-development sites?	No	Yes	No	No	No	No	No
14. Have minimum tree preservation standards been established for new development?	No	Yes	Yes	No	No	No	No
15. Do capital improvement plans include tree planting as part of project budgets?	Yes	Yes	No	No	No	No	No
16. Do you require that public trees removed or damaged during construction be replaced with an equivalent amount of tree diameter? (for example, if a 24-inch diameter tree is removed it should be replaced with six four-inch diameter trees).	No	Yes	No	No	No	No	No
Objective IV: Minimize soil compaction as a result of construction activities or prior development.							
17. Have you adopted provisions within land development regulations that prohibit the compaction of soils in areas needed for stormwater recharge?	No	No	No	No	No	Yes	No
18. Have you adopted requirements for construction site inspections to ensure that soils are not compacted?	No	No	No	No	N/A	No	No
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.							
19. Have LID landscaping standards been adopted that require the preservation of as much natural vegetation as possible and encourage low-maintenance native landscaping?	No	Yes	No	No	No	No	No
Objective VI: Minimize impervious surfaces.							
20. Did your community adopt compact growth ordinances such as conservation development, planned development, or mixed use development?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21. Has your community identified growth centers where increased density is appropriate and encouraged?	Yes	Yes	Yes	Yes	No	Yes	No

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Low Impact Development Objectives	Cumberland	East Greenwich	East Providence	Exeter	Foster	Glocester (Chepachet)	Hopkinton
22. Are residential streets required to be as narrow as possible to accommodate traffic volumes without compromising safety?	Yes	No	No	Yes	N/A	Yes	N/A
22A. Do you require road widths of 22 feet or less for subdivisions of 40 or fewer homes or average daily trips less than 400?							
22B. Do you require road widths of 26 feet or less for subdivisions of 40-200 homes or average daily trips of 400-2,000?	Yes	Yes	No	Yes	N/A	No	N/A
23. Are street right-of-way widths required to be less than 45 feet?	No	Yes	No	Yes	No	Yes	No
24. Are driveway lengths and width required to be reduced to the extent possible with pervious surfaces and shared driveways encouraged wherever appropriate?	No	No	No	No	No	No	Yes
24A. Do you require driveways to be nine feet or less (one lane) and 18 feet or less (two lanes)?							
24B. Do you allow pervious surfaces to be used for residential driveways?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
24C. Do you allow shared driveways to be used in residential developments?	Yes: By waivers	No	Yes	Yes	Yes: In certain cases	Yes	Yes
25. Do you allow the flexibility with curbs in residential streets to encourage side-of-the-road drainage into vegetated open swales,, where possible?	No: Snow plows damage lawns	No	Yes	Yes	Yes	Yes	Yes
26. Where curbs are needed, do you allow opening in curbs that allow runoff to flow into swales?	Yes	Yes	N/A	Yes	N/A	Yes	Yes
27. Have flexible sidewalk design standards been adopted to limit impervious cover?	Yes: By waivers	Yes	No (5 ft)	N/A	N/A	N/A	No
27A. Is the minimum sidewalk width four feet or less?							
27B. Do you require sidewalks on one side of the street only in low-density neighborhoods?	Yes: By waivers	Yes	No	N/A	N/A	N/A	No
27C. Are sidewalks required to be gently sloped so that they drain into the front yard rather than the street?	No	Yes	No	N/A	N/A	N/A	No
27D. Can alternative pedestrian access such as trails or unpaved footpaths be used instead of sidewalks?	No	No	No	Yes	Yes	Yes	Yes
27E. Can pervious surfaces be used for sidewalks?	Yes: By waivers	No	No	Yes	Yes	Yes	Yes
28. Did your community modify the dimension, design, and surface material of cul-de-sacs to reduce total impervious cover?	No	No	No (50 ft)	Yes	No	Yes	No
28A. Is the minimum radius allowed for cul-de-sacs less than 45 feet?							
28B. Can a landscaped island or native vegetation be within the cul-de-sac?	Yes	No	Yes	Yes	Yes	Yes	Yes
28C. Are alternative turnarounds allowed such as hammerheads or tees?	No	No	Yes	Yes	Yes	Yes	Yes
29. Have both minimum and maximum parking ratios been adopted to provide adequate parking while reducing excess impervious cover?	No: Min. but no maximum	No	Yes	Yes	No: Min. but no maximum	Yes	No

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Low Impact Development Objectives	Cumberland	East Greenwich	East Providence	Exeter	Foster	Glocester (Chepachet)	Hopkinton
30. Do you allow pervious materials to be used for parking areas and overflow parking?	Yes	Yes	No	Yes	Yes	Yes	Yes
31. Are parking ratios reduced if the site is served by mass transit or has good pedestrian access?	No: Done by variance before zoning board	No	Yes	N/A	N/A	No	No
32. Is shared parking encouraged and implemented wherever feasible in order to reduce total impervious cover?	No	Yes	Yes	Yes	No	Yes	Yes
33. Do off-site parking allowances exist to accommodate re-development and mixed-use compact growth?	Yes	No	Yes	N/A	N/A	Yes	No
34. Are parking stalls and aisles reduced to the extent feasible in order to decrease total impervious cover?	Yes	Yes	No: 10' x 18'	No	N/A	No	Yes
34A. Are the minimum stall dimensions nine feet wide by 18 feet long?							
34B. Is 20% or more of the parking lot required to have smaller dimensions (8 feet by 16 feet) for compact cars?	No	No	No	No	N/A	No	No
35. Are parking lot landscaping requirements flexible and do they encourage LID techniques?	No	Yes	Yes	No	No: No adopted written standards, but highly encouraged	No	Yes
35A. Do parking lots of ten or more spaces require that 10% of the parking lot area be dedicated to landscaped areas that can include LID stormwater practices?							
35B. Is landscaping required within parking areas to "break up" pavement at fixed intervals?	No	Yes	Yes	Yes	No: No adopted written standards, but highly encouraged	Yes	Yes
35C. Is a 25-30% tree canopy coverage over on-site parking lots required?	No	No	No (20%)	No	No: No adopted written standards, but highly encouraged	No	No

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Low Impact Development Objectives	Cumberland	East Greenwich	East Providence	Exeter	Foster	Glocester (Chepachet)	Hopkinton
36. Have impervious cover limits been adopted to reduce impervious cover on a community or partial-community-basis?	Yes	No	Yes	No	No	No	Yes
GOAL: Manage the impacts at the source.							
Objective VII: Infiltrate precipitation as close as possible to the point it reaches the ground using vegetated conveyance and treatment systems.							
37. Have you amended regulations to require all development projects comply with LID pursuant to the <i>Rhode Island Stormwater Design and Installation Standards Manual</i> ?	No	No	Yes	Yes	No	No	Yes
38. Have you revised regulations to allow and encourage LID vegetated treatment systems such as bioretention, swales, and filter strips to promote recharge and the treatment of runoff?	No: No adopted written standards, but highly encouraged and done in practice	No	Yes	Yes	Yes	No: No adopted written standards, but highly encouraged and done in practice	Yes
Objective VIII: Break up or disconnect the flow of runoff over impervious surfaces.							
39. Have you amended regulations to encourage runoff to be diverted over pervious surfaces to foster infiltration, runoff reduction, and pollutant removal, where appropriate?	No	No	Yes	Yes	No: No adopted written standards, but highly encouraged	No	Yes
Objective IX: Provide source controls to prevent or minimize pollutants in stormwater.							
40. Do you encourage or require appropriate pet waste disposal to prevent pet waste from entering stormwater runoff?	Yes	Yes	Yes	No	No	No	No
41. Are commercial and industrial developments required to sweep their impervious areas on an annual basis?	No	Yes	No	No	No: No adopted written standards, but usually done at the owners will	No	No
42. Is street sweeping done regularly on community streets to limit pollutant transport to waterbodies and reduce maintenance of catch basins?	Yes	Yes	Yes	Yes: Is done once per year maximum	Yes	Yes	Yes
43. Are community road salt storage piles covered?	No: Due to lack of funds	Yes	Yes	Yes	Yes	Yes	Yes

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Low Impact Development Objectives	Cumberland	East Greenwich	East Providence	Exeter	Foster	Glocester (Chepachet)	Hopkinton
44. Has a community wastewater management district been adopted to encourage or require all onsite wastewater treatment systems be inspected and maintained regularly?	No	No	N/A: Few onsite wastewater treatment systems	No	No	No	Yes
45. Have you adopted a stormwater utility district to manage the existing impacts of stormwater runoff?	No: Isn't necessary because highway department is able to maintain out of general funds	No	No	No	No	No	No
Objective X: <i>Re-vegetate previously cleared areas to help restore groundwater recharge and pollutant removal.</i>							
46. Have regulations been adopted to encourage re-vegetation with native species, where possible?	No	No	Yes	No	No: No adopted written regulation, but highly encouraged and done in practice	No adopted written standards, but highly encouraged and done in practice	No

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Low Impact Development Objectives	Jamestown	Johnston	Lincoln	Little Compton	Middletown	Narragansett	New Shoreham
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?	No	Yes	No	No	Yes	No	Yes
2. Has a transfer of development rights ordinance been adopted to provide an incentive for landowners to preserve natural lands?	No	No	No	No	No	No	No
3. Are limits of disturbance required to be marked on all construction plans?	Yes	Yes	Yes	No	Yes	No	No
4. Are there limits on lawn area for residential lots to protect open space?	No	Yes	No	No	No	No: Only for Residential Cluster Developments.	No
5. Are undisturbed vegetative areas required on new lots as visual screens?	Yes: Only when commercial abut residential developments	No	No	No	Yes: Only for new commercial developments	Yes: Only when commercial or industrial abut residential developments	Yes: Done on a case by case basis at the discretion of the Planning Board
Objective II: Maximize the protection of natural drainage areas, streams, surface waters, wetlands, and jurisdictional wetland buffers.							
6. Do regulations require or encourage new lots to exclude freshwater and /or coastal wetland jurisdictional areas, to the extent practicable?	No	No	Yes	Yes	No	Yes	Yes
7. Do regulations direct building envelopes away from steep slopes, riparian corridors, hydric soils, and floodplains, to the extent practicable?	Yes	Yes	Yes	Yes	No	Yes	Yes
8. Has a community buffer program been created to establish or restore a naturally vegetated buffer system along all surface waters and wetlands to supplement and expand upon the minimum requirements of the DEM and CRMC programs, where applicable?	Yes	No	No	No	No	Yes	No
9. Are zoning setback distances flexible in residential districts to avoid requiring house lot locations to be unnecessarily close to surface waters, wetland, and riparian corridors?	No	No	No	No	No	No	Yes: Only in flexible design subdivisions

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Low Impact Development Objectives	Jamestown	Johnston	Lincoln	Little Compton	Middletown	Narragansett	New Shoreham
Objective III: Minimize land disturbance, including clearing and grading, and avoid areas susceptible to erosion and sediment loss.							
10. Has your community adopted an erosion and sediment control ordinance?	Yes	Yes	Yes	No	Yes	Yes	Yes
11. Did your community adopt a grading ordinance to require applicants to maintain as much natural vegetation as possible and limit clearing, grading, and land-disturbing activities to the minimum needed for construction maintenance and emergency services?	Yes: For lots over an acre	Yes	No	No	No	No	No
12. Has your community adopted a forest cover, tree protection, or tree canopy ordinance?	No	No	No	No	Yes: Only for public street trees	Yes: Only for public street trees	No
13. Do you require permits before removing trees on new or re-development sites?	No	Yes	No	No	Yes: Only for public street trees	Yes	No
14. Have minimum tree preservation standards been established for new development?	No	Yes	No	No	Yes: Only for public street trees	No	No
15. Do capital improvement plans include tree planting as part of project budgets?	Yes	No	No	N/A	No	No	No
16. Do you require that public trees removed or damaged during construction be replaced with an equivalent amount of tree diameter? (for example, if a 24-inch diameter tree is removed it should be replaced with six four-inch diameter trees).	Yes	Yes	No	No	Yes	Yes	No
Objective IV: Minimize soil compaction as a result of construction activities or prior development.							
17. Have you adopted provisions within land development regulations that prohibit the compaction of soils in areas needed for stormwater recharge?	No	No	No	No	N/A: Due to poor soils	No	No
18. Have you adopted requirements for construction site inspections to ensure that soils are not compacted?	No	No	No	No	N/A: Due to poor soils	No	No
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.							
19. Have LID landscaping standards been adopted that require the preservation of as much natural vegetation as possible and encourage low-maintenance native landscaping?	No	No	No	No	Yes	Yes	No
Objective VI: Minimize impervious surfaces.							
20. Did your community adopt compact growth ordinances such as conservation development, planned development, or mixed use development?	No	Yes	No	No	Yes	Yes	Yes
21. Has your community identified growth centers where increased density is appropriate and encouraged?	Yes: Only in certain districts	N/A	Yes	No	Yes	Yes: But not to state standards	Yes

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Jamestown	Johnston	Lincoln	Little Compton	Middletown	Narragansett	New Shoreham
22. Are residential streets required to be as narrow as possible to accommodate traffic volumes without compromising safety?	N/A	No	No	No	No	No	Yes
22A. Do you require road widths of 22 feet or less for subdivisions of 40 or fewer homes or average daily trips less than 400?							
22B. Do you require road widths of 26 feet or less for subdivisions of 40-200 homes or average daily trips of 400-2,000?	Yes	Yes	No	Yes	Yes	Yes	N/A
23. Are street right-of-way widths required to be less than 45 feet?	Yes: Local and minor streets. Collector streets have ROW widths of 50 feet	No	No	Yes	No	No: Local streets ROW required 50 feet. For subdivisions 30-40 feet typical	Yes
24. Are driveway lengths and width required to be reduced to the extent possible with pervious surfaces and shared driveways encouraged wherever appropriate?	No	No	No	No	No	No	No
24A. Do you require driveways to be nine feet or less (one lane) and 18 feet or less (two lanes)?							
24B. Do you allow pervious surfaces to be used for residential driveways?	Yes	Yes	No	Yes	Yes	Yes	Yes
24C. Do you allow shared driveways to be used in residential developments?	Yes	Yes	No	Yes	Yes	Yes	Yes
25. Do you allow the flexibility with curbs in residential streets to encourage side-of-the-road drainage into vegetated open swales,, where possible?	Yes	Yes	No	Yes	Yes	Yes	Yes
26. Where curbs are needed, do you allow opening in curbs that allow runoff to flow into swales?	Yes	Yes	No	Yes	Yes	No	N/A
27. Have flexible sidewalk design standards been adopted to limit impervious cover?	Yes	No	Yes	No	Yes	No	Yes
27A. Is the minimum sidewalk width four feet or less?							
27B. Do you require sidewalks on one side of the street only in low-density neighborhoods?	No	Yes	Yes	No	No	Yes: Certain cases	Yes: Certain cases
27C. Are sidewalks required to be gently sloped so that they drain into the front yard rather than the street?	N/A	No	No	No	No	No	No
27D. Can alternative pedestrian access such as trails or unpaved footpaths be used instead of sidewalks?	N/A	Yes	Yes	Yes	No	No	Yes: Certain cases
27E. Can pervious surfaces be used for sidewalks?	No	Yes	Yes	Yes	No	Yes	Yes: Certain cases
28. Did your community modify the dimension, design, and surface material of cul-de-sacs to reduce total impervious cover?	No	No (50 ft)	No	No	No (50 ft.)	No (50 ft.)	Yes
28A. Is the minimum radius allowed for cul-de-sacs less than 45 feet?							
28B. Can a landscaped island or native vegetation be within the cul-de-sac?	Yes	Yes	No	Yes	No	Yes	Yes
28C. Are alternative turnarounds allowed such as hammerheads or tees?	Yes: By waiver	Yes	No	Yes	No	Yes	Yes
29. Have both minimum and maximum parking ratios been adopted to provide adequate parking while reducing excess impervious cover?	No: Min. but no maximum	Yes	No	No	Yes	No: Min. but no maximum	No: Min. but no maximum

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Jamestown	Johnston	Lincoln	Little Compton	Middletown	Narragansett	New Shoreham
30. Do you allow pervious materials to be used for parking areas and overflow parking?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
31. Are parking ratios reduced if the site is served by mass transit or has good pedestrian access?	Yes: But only for buildings that are designated as compatible mixed use	Yes	No	No	No	No	No
32. Is shared parking encouraged and implemented wherever feasible in order to reduce total impervious cover?	Yes	Yes: Only in Redevelopment Overlay District	Yes	No	Yes	Yes	Yes
33. Do off-site parking allowances exist to accommodate re-development and mixed-use compact growth?	Yes	Yes: Only in Redevelopment Overlay District	No	No	Yes	No: May be allowed through easement on a case by case basis	No
34. Are parking stalls and aisles reduced to the extent feasible in order to decrease total impervious cover?	Yes	No	No	No	Yes	Yes	No
34A. Are the minimum stall dimensions nine feet wide by 18 feet long?							
34B. Is 20% or more of the parking lot required to have smaller dimensions (8 feet by 16 feet) for compact cars?	Yes	No	No	No	No	No	No
35. Are parking lot landscaping requirements flexible and do they encourage LID techniques?	No	No	No	No	Yes	No	No
35A. Do parking lots of ten or more spaces require that 10% of the parking lot area be dedicated to landscaped areas that can include LID stormwater practices?							
35B. Is landscaping required within parking areas to "break up" pavement at fixed intervals?	Yes	Yes	Yes	No	Yes	No	Yes
35C. Is a 25-30% tree canopy coverage over on-site parking lots required?	No	No (20%)	No	No	Yes	No	No

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Jamestown	Johnston	Lincoln	Little Compton	Middletown	Narragansett	New Shoreham
36. Have impervious cover limits been adopted to reduce impervious cover on a community or partial-community-basis?	Yes	No	No	No	No	Yes	No
GOAL: Manage the impacts at the source.							
Objective VII: Infiltrate precipitation as close as possible to the point it reaches the ground using vegetated conveyance and treatment systems.							
37. Have you amended regulations to require all development projects comply with LID pursuant to the <i>Rhode Island Stormwater Design and Installation Standards Manual</i> ?	No	Yes	Yes	No	Yes	No: Stormwater design and installation standards are used and encouraged for development projects. Intend to amend as of September 2013	Yes
38. Have you revised regulations to allow and encourage LID vegetated treatment systems such as bioretention, swales, and filter strips to promote recharge and the treatment of runoff?	Yes: Only in the high ground water district	Yes	Yes	Yes	Yes	No	No
Objective VIII: Break up or disconnect the flow of runoff over impervious surfaces.							
39. Have you amended regulations to encourage runoff to be diverted over pervious surfaces to foster infiltration, runoff reduction, and pollutant removal, where appropriate?	Yes: Only in the high ground water district	No	Yes	No	Yes	Yes	Yes
Objective IX: Provide source controls to prevent or minimize pollutants in stormwater.							
40. Do you encourage or require appropriate pet waste disposal to prevent pet waste from entering stormwater runoff?	Yes	Yes	No	No	Yes	No	No
41. Are commercial and industrial developments required to sweep their impervious areas on an annual basis?	No	Yes	No	No	Yes: Only for new commercial developments	No	No
42. Is street sweeping done regularly on community streets to limit pollutant transport to waterbodies and reduce maintenance of catch basins?	Yes	Yes	Yes	No	Yes	Yes	Yes
43. Are community road salt storage piles covered?	Yes	No	Yes	Yes	Yes	Yes	Yes

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Jamestown	Johnston	Lincoln	Little Compton	Middletown	Narragansett	New Shoreham
44. Has a community wastewater management district been adopted to encourage or require all onsite wastewater treatment systems be inspected and maintained regularly?	Yes	No	N/A: Few onsite wastewater treatment systems (OWTS)	No	N/A: For onsite wastewater treatment systems (OWTS)	No: Though the community requires all septic systems to be pumped every 4 years	Yes
45. Have you adopted a stormwater utility district to manage the existing impacts of stormwater runoff?	No: Isn't necessary because capital budget is able to maintain out of general funds	No	No	No	No	No	No
Objective X: <i>Re-vegetate previously cleared areas to help restore groundwater recharge and pollutant removal.</i>							
46. Have regulations been adopted to encourage re-vegetation with native species, where possible?	Yes: Only in Village special development district	No	No	No	Yes: Only for new commercial developments	No	No

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Newport	North Kingstown	North Providence	North Smithfield	Pawtucket	Portsmouth	Providence
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?	No	Yes	No	Yes	NA	No	No
2. Has a transfer of development rights ordinance been adopted to provide an incentive for landowners to preserve natural lands?	No	Yes	No	No	No	No	No
3. Are limits of disturbance required to be marked on all construction plans?	No	Yes	Yes	Yes	Yes	Yes	No
4. Are there limits on lawn area for residential lots to protect open space?	No	No	Yes	No	No	No	No
5. Are undisturbed vegetative areas required on new lots as visual screens?	No	No: Could be required at the request of the Planning Board for new developments	Yes: Only when commercial or industrial abut residential developments	No	NA	No	No
Objective II: Maximize the protection of natural drainage areas, streams, surface waters, wetlands, and jurisdictional wetland buffers.							
6. Do regulations require or encourage new lots to exclude freshwater and /or coastal wetland jurisdictional areas, to the extent practicable?	Yes	Yes	No	Yes	No	Yes	Yes
7. Do regulations direct building envelopes away from steep slopes, riparian corridors, hydric soils, and floodplains, to the extent practicable?	No	Yes	Yes	Yes	Yes	Yes	Yes
8. Has a community buffer program been created to establish or restore a naturally vegetated buffer system along all surface waters and wetlands to supplement and expand upon the minimum requirements of the DEM and CRMC programs, where applicable?	No	Yes	No	No	No	No	No
9. Are zoning setback distances flexible in residential districts to avoid requiring house lot locations to be unnecessarily close to surface waters, wetland, and riparian corridors?	No	No	No	Yes	Yes	Yes	No

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Newport	North Kingstown	North Providence	North Smithfield	Pawtucket	Portsmouth	Providence
Objective III: Minimize land disturbance, including clearing and grading, and avoid areas susceptible to erosion and sediment loss.							
10. Has your community adopted an erosion and sediment control ordinance?	Yes	Yes	Yes	Yes	Yes	Yes	No
11. Did your community adopt a grading ordinance to require applicants to maintain as much natural vegetation as possible and limit clearing, grading, and land-disturbing activities to the minimum needed for construction maintenance and emergency services?	Yes	Yes	Yes	No	No	No	No
12. Has your community adopted a forest cover, tree protection, or tree canopy ordinance?	Yes	Yes	No	No	No	Yes	Yes
13. Do you require permits before removing trees on new or re-development sites?	No	No	No	No	No	No	No
14. Have minimum tree preservation standards been established for new development?	No	No	Yes	No	No	No	Yes
15. Do capital improvement plans include tree planting as part of project budgets?	No	Yes	Yes	Yes	Yes	No	Yes
16. Do you require that public trees removed or damaged during construction be replaced with an equivalent amount of tree diameter? (for example, if a 24-inch diameter tree is removed it should be replaced with six four-inch diameter trees).	Yes	Yes	No	No	Yes	No	No
Objective IV: Minimize soil compaction as a result of construction activities or prior development.							
17. Have you adopted provisions within land development regulations that prohibit the compaction of soils in areas needed for stormwater recharge?	Yes	No	No	No	No	No	No
18. Have you adopted requirements for construction site inspections to ensure that soils are not compacted?	No	No	No	No	No	No	No
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.							
19. Have LID landscaping standards been adopted that require the preservation of as much natural vegetation as possible and encourage low-maintenance native landscaping?	Yes: Within the Critical Area	Yes	No	No	Yes	No	No
Objective VI: Minimize impervious surfaces.							
20. Did your community adopt compact growth ordinances such as conservation development, planned development, or mixed use development?	Yes	Yes	No	Yes	Yes	Yes	No
21. Has your community identified growth centers where increased density is appropriate and encouraged?	Yes	Yes	Yes	Yes	Yes	No	Yes

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Newport	North Kingstown	North Providence	North Smithfield	Pawtucket	Portsmouth	Providence
22. Are residential streets required to be as narrow as possible to accommodate traffic volumes without compromising safety?	No	Yes	No: Use NFPA 26-24' road widths	No	N/A	No	N/A
22A. Do you require road widths of 22 feet or less for subdivisions of 40 or fewer homes or average daily trips less than 400?							
22B. Do you require road widths of 26 feet or less for subdivisions of 40-200 homes or average daily trips of 400-2,000?	No	Yes	No: Use NFPA 26-24' road widths	No	N/A	No	N/A
23. Are street right-of-way widths required to be less than 45 feet?	Yes: Only for local and marginal access roads	No (50 ft)	No	No	N/A	No	N/A
24. Are driveway lengths and width required to be reduced to the extent possible with pervious surfaces and shared driveways encouraged wherever appropriate?	N/A	No	No	No	No	No	No
24A. Do you require driveways to be nine feet or less (one lane) and 18 feet or less (two lanes)?							
24B. Do you allow pervious surfaces to be used for residential driveways?	N/A	Yes	No	Yes	No	No	Yes
24C. Do you allow shared driveways to be used in residential developments?	Yes	Yes	Yes	Yes	No	Yes	Yes
25. Do you allow the flexibility with curbs in residential streets to encourage side-of-the-road drainage into vegetated open swales,, where possible?	Yes	Yes	Yes	Yes	N/A	Yes	No
26. Where curbs are needed, do you allow opening in curbs that allow runoff to flow into swales?	Yes	Yes	Yes	Yes	N/A	Yes	No
27. Have flexible sidewalk design standards been adopted to limit impervious cover?	Yes	No: American Disabilities Act req'mts	Yes	Yes	N/A	No	No
27A. Is the minimum sidewalk width four feet or less?							
27B. Do you require sidewalks on one side of the street only in low-density neighborhoods?	N/A	No	No	Yes	Yes	No	N/A
27C. Are sidewalks required to be gently sloped so that they drain into the front yard rather than the street?	Yes	No	No	No	N/A	No	No
27D. Can alternative pedestrian access such as trails or unpaved footpaths be used instead of sidewalks?	Yes	Yes	N/A	Yes	Yes	Yes	Yes
27E. Can pervious surfaces be used for sidewalks?	Yes	Yes	Yes	Yes	No	No	Yes
28. Did your community modify the dimension, design, and surface material of cul-de-sacs to reduce total impervious cover?	No	No (50 ft)	No	Yes	No	No	N/A
28A. Is the minimum radius allowed for cul-de-sacs less than 45 feet?							
28B. Can a landscaped island or native vegetation be within the cul-de-sac?	Yes	Yes	Yes	Yes	No	Yes	N/A
28C. Are alternative turnarounds allowed such as hammerheads or tees?	Yes	Yes	Yes	Yes	No	No	N/A
29. Have both minimum and maximum parking ratios been adopted to provide adequate parking while reducing excess impervious cover?	No	Yes	Yes	No	Yes	Yes	No

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Newport	North Kingstown	North Providence	North Smithfield	Pawtucket	Portsmouth	Providence
30. Do you allow pervious materials to be used for parking areas and overflow parking?	Yes: Certain cases	Yes	Yes	Yes	Yes	Yes	Yes
31. Are parking ratios reduced if the site is served by mass transit or has good pedestrian access?	No	Yes	N/A	No	No	No	Yes
32. Is shared parking encouraged and implemented wherever feasible in order to reduce total impervious cover?	No	Yes	Yes	Yes	Yes	Yes	Yes
33. Do off-site parking allowances exist to accommodate re-development and mixed-use compact growth?	No	Yes	Yes	No	Yes	N/A	Yes
34. Are parking stalls and aisles reduced to the extent feasible in order to decrease total impervious cover?	Yes	No	Yes	Yes	Yes	No	N/A
34A. Are the minimum stall dimensions nine feet wide by 18 feet long?							
34B. Is 20% or more of the parking lot required to have smaller dimensions (8 feet by 16 feet) for compact cars?	No: Is allowed if you have 50 or more spaces. 50% of the lot may be used for compact cars	No	Yes	No	No	No	No
35. Are parking lot landscaping requirements flexible and do they encourage LID techniques?	No	No	Yes	No	Yes	No	No
35A. Do parking lots of ten or more spaces require that 10% of the parking lot area be dedicated to landscaped areas that can include LID stormwater practices?							
35B. Is landscaping required within parking areas to "break up" pavement at fixed intervals?	Yes	Yes	Yes	No	Yes	Yes	No
35C. Is a 25-30% tree canopy coverage over on-site parking lots required?	No	Yes	No	No	No	No	No

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Newport	North Kingstown	North Providence	North Smithfield	Pawtucket	Portsmouth	Providence
36. Have impervious cover limits been adopted to reduce impervious cover on a community or partial-community-basis?	No	Yes	No	Yes	No	No	No
GOAL: Manage the impacts at the source.							
Objective VII: Infiltrate precipitation as close as possible to the point it reaches the ground using vegetated conveyance and treatment systems.							
37. Have you amended regulations to require all development projects comply with LID pursuant to the <i>Rhode Island Stormwater Design and Installation Standards Manual</i> ?	Yes	No	Yes	Yes	No	No	No
38. Have you revised regulations to allow and encourage LID vegetated treatment systems such as bioretention, swales, and filter strips to promote recharge and the treatment of runoff?	Yes	Yes	No	Yes	Yes	No	No
Objective VIII: Break up or disconnect the flow of runoff over impervious surfaces.							
39. Have you amended regulations to encourage runoff to be diverted over pervious surfaces to foster infiltration, runoff reduction, and pollutant removal, where appropriate?	Yes	Yes	No	Yes	Yes	No	Yes
Objective IX: Provide source controls to prevent or minimize pollutants in stormwater.							
40. Do you encourage or require appropriate pet waste disposal to prevent pet waste from entering stormwater runoff?	Yes	Yes	Yes	Yes	No	Yes	No
41. Are commercial and industrial developments required to sweep their impervious areas on an annual basis?	No	Yes: Only in new developments	No	Yes	No	N/A	No
42. Is street sweeping done regularly on community streets to limit pollutant transport to waterbodies and reduce maintenance of catch basins?	Yes	Yes	Yes	Yes	Yes	Yes	No
43. Are community road salt storage piles covered?	Yes	Yes	Yes	Yes	Yes	Yes	No

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Newport	North Kingstown	North Providence	North Smithfield	Pawtucket	Portsmouth	Providence
44. Has a community wastewater management district been adopted to encourage or require all onsite wastewater treatment systems be inspected and maintained regularly?	N/A: Few onsite wastewater treatment systems (OWTS)	Yes	N/A	No	No	Yes	N/A
45. Have you adopted a stormwater utility district to manage the existing impacts of stormwater runoff?	No	No	No	No	No	No	No
Objective X: <i>Re-vegetate previously cleared areas to help restore groundwater recharge and pollutant removal.</i>							
46. Have regulations been adopted to encourage re-vegetation with native species, where possible?	Yes: For all properties within the Critical Area Zoning. Not required for general provisions	Yes	No	No	Yes	No	No

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Richmond	Scituate	Smithfield (Esmond)	South Kingstown	Tiverton	Warren	Warwick
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?	Yes	No	Yes	Yes	Yes	No	No
2. Has a transfer of development rights ordinance been adopted to provide an incentive for landowners to preserve natural lands?	No	No	No	No	No	Yes	No
3. Are limits of disturbance required to be marked on all construction plans?	Yes	No	Yes	Yes	No	Yes	Yes
4. Are there limits on lawn area for residential lots to protect open space?	No	No	No	Yes	Yes	No	No
5. Are undisturbed vegetative areas required on new lots as visual screens?	Yes	Yes: Only when commercial or industrial abut residential developments	Yes	No	Yes	No	No
Objective II: Maximize the protection of natural drainage areas, streams, surface waters, wetlands, and jurisdictional wetland buffers.							
6. Do regulations require or encourage new lots to exclude freshwater and /or coastal wetland jurisdictional areas, to the extent practicable?	Yes	Yes	Yes: For major subdivisions only	Yes	Yes	No	Yes: Partially, have a provision for multi family units but not for single family homes
7. Do regulations direct building envelopes away from steep slopes, riparian corridors, hydric soils, and floodplains, to the extent practicable?	No	Yes	No: Deductions for constrained soils in Major Subdivisions only affects density calculation	Yes	Yes	Yes	Yes
8. Has a community buffer program been created to establish or restore a naturally vegetated buffer system along all surface waters and wetlands to supplement and expand upon the minimum requirements of the DEM and CRMC programs, where applicable?	No	Yes	Yes	No	Yes: In some locations where drinking water supplies are present	No	No
9. Are zoning setback distances flexible in residential districts to avoid requiring house lot locations to be unnecessarily close to surface waters, wetland, and riparian corridors?	N/A	Yes	No	Yes	Yes: In rural residential development	No	No: However, the Zoning Board of Appeals regularly approves front, side and rear yard setbacks to locate structure away from sensitive environmental areas

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Richmond	Scituate	Smithfield (Esmond)	South Kingstown	Tiverton	Warren	Warwick
Objective III: Minimize land disturbance, including clearing and grading, and avoid areas susceptible to erosion and sediment loss.							
10. Has your community adopted an erosion and sediment control ordinance?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11. Did your community adopt a grading ordinance to require applicants to maintain as much natural vegetation as possible and limit clearing, grading, and land-disturbing activities to the minimum needed for construction maintenance and emergency services?	No	Yes	Yes	No	No	No	No
12. Has your community adopted a forest cover, tree protection, or tree canopy ordinance?	Yes	No	Yes	Yes	No	No	No
13. Do you require permits before removing trees on new or re-development sites?	No	No	Yes	No	No	No	Yes
14. Have minimum tree preservation standards been established for new development?	No	Yes	Yes	Yes	Yes	No	Yes
15. Do capital improvement plans include tree planting as part of project budgets?	No	No	No	N/A	No	No	No
16. Do you require that public trees removed or damaged during construction be replaced with an equivalent amount of tree diameter? (for example, if a 24-inch diameter tree is removed it should be replaced with six four-inch diameter trees).	No	Yes	No	Yes	Yes	No	Yes
Objective IV: Minimize soil compaction as a result of construction activities or prior development.							
17. Have you adopted provisions within land development regulations that prohibit the compaction of soils in areas needed for stormwater recharge?	No	No	No	No	No	No	Yes
18. Have you adopted requirements for construction site inspections to ensure that soils are not compacted?	No	No	No	No	No	Yes	Yes
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.							
19. Have LID landscaping standards been adopted that require the preservation of as much natural vegetation as possible and encourage low-maintenance native landscaping?	Yes	Yes	Yes	No	Yes	No	Yes
Objective VI: Minimize impervious surfaces.							
20. Did your community adopt compact growth ordinances such as conservation development, planned development, or mixed use development?	Yes	Yes	Yes	Yes	Yes	Yes	Yes: In certain districts
21. Has your community identified growth centers where increased density is appropriate and encouraged?	Yes	Yes: Re ; Affordable Housing Plan	Yes	Yes	No	Yes	Yes

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Richmond	Scituate	Smithfield (Esmond)	South Kingstown	Tiverton	Warren	Warwick
22. Are residential streets required to be as narrow as possible to accommodate traffic volumes without compromising safety? 22A. Do you require road widths of 22 feet or less for subdivisions of 40 or fewer homes or average daily trips less than 400?	Yes	Yes	No: Use NFPA Fire 26-24' road widths	No: Req'd for 10 or fewer homes	No	No	No
22B. Do you require road widths of 26 feet or less for subdivisions of 40-200 homes or average daily trips of 400-2,000?	N/A	Yes	No: Use NFPA 26-24' road widths	Yes	No	No	No: 26 foot min. for access roads only
23. Are street right-of-way widths required to be less than 45 feet?	No	No	No	No	Yes	No	No: But Access Roads (0-250 ADT) can be 40 feet
24. Are driveway lengths and width required to be reduced to the extent possible with pervious surfaces and shared driveways encouraged wherever appropriate? 24A. Do you require driveways to be nine feet or less (one lane) and 18 feet or less (two lanes)?	No	No	No	No	No	No	No
24B. Do you allow pervious surfaces to be used for residential driveways?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
24C. Do you allow shared driveways to be used in residential developments?	Yes	Yes	Yes	Yes	Yes	Yes	No
25. Do you allow the flexibility with curbs in residential streets to encourage side-of-the-road drainage into vegetated open swales,, where possible?	Yes	Yes	Yes	Yes	Yes	Yes	No
26. Where curbs are needed, do you allow opening in curbs that allow runoff to flow into swales?	Yes	N/A	Yes	Yes	Yes	Yes	No
27. Have flexible sidewalk design standards been adopted to limit impervious cover? 27A. Is the minimum sidewalk width four feet or less?	N/A	No	Yes	Yes	No: American Disabilities Act req'mts	No	Yes: 4 foot for Access and Subcollector roads only
27B. Do you require sidewalks on one side of the street only in low-density neighborhoods?	N/A	N/A	N/A	No	Yes	No	Yes
27C. Are sidewalks required to be gently sloped so that they drain into the front yard rather than the street?	N/A	No	No	N/A	No	No	No
27D. Can alternative pedestrian access such as trails or unpaved footpaths be used instead of sidewalks?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
27E. Can pervious surfaces be used for sidewalks?	N/A	Yes	Yes	Yes	No: Not if Town maintained	No	Yes
28. Did your community modify the dimension, design, and surface material of cul-de-sacs to reduce total impervious cover? 28A. Is the minimum radius allowed for cul-de-sacs less than 45 feet?	Yes	No	Yes	Yes	Yes	No	No
28B. Can a landscaped island or native vegetation be within the cul-de-sac?	Yes	Yes	Yes	Yes	Yes	Yes	Yes: Certain cases
28C. Are alternative turnarounds allowed such as hammerheads or tees?	Yes	Yes	Yes	Yes	Yes	Yes	No
29. Have both minimum and maximum parking ratios been adopted to provide adequate parking while reducing excess impervious cover?	No	No: Min. but no maximum	No: Min. but no maximum	No	No	No	No

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Richmond	Scituate	Smithfield (Esmond)	South Kingstown	Tiverton	Warren	Warwick
30. Do you allow pervious materials to be used for parking areas and overflow parking?	Yes	Yes	Yes	Yes	Yes	Yes	Yes: Pervious pavement only
31. Are parking ratios reduced if the site is served by mass transit or has good pedestrian access?	N/A	No: Done by variance before zoning board	No	No	N/A	No	No
32. Is shared parking encouraged and implemented wherever feasible in order to reduce total impervious cover?	Yes	Yes: In village areas only	No: Though consideration is given to shared parking when relief from parking requirements is sought	No	Yes: In commercial zones	No	No
33. Do off-site parking allowances exist to accommodate re-development and mixed-use compact growth?	N/A	Yes	No	Yes	Yes: In commercial zones	Yes	Yes
34. Are parking stalls and aisles reduced to the extent feasible in order to decrease total impervious cover?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
34A. Are the minimum stall dimensions nine feet wide by 18 feet long?							
34B. Is 20% or more of the parking lot required to have smaller dimensions (8 feet by 16 feet) for compact cars?	No	No	No	No	No: Only is Planned Development Park Zone	No	No
35. Are parking lot landscaping requirements flexible and do they encourage LID techniques?	No	Yes	No: Lots with 18 or more spaces require interior landscaping	No	No: Threshold for review is based on the size of the building and/or the land area disturbed.	No	No
35A. Do parking lots of ten or more spaces require that 10% of the parking lot area be dedicated to landscaped areas that can include LID stormwater practices?							
35B. Is landscaping required within parking areas to "break up" pavement at fixed intervals?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
35C. Is a 25-30% tree canopy coverage over on-site parking lots required?	No	No	No	No	No	No	No

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Richmond	Scituate	Smithfield (Esmond)	South Kingstown	Tiverton	Warren	Warwick
36. Have impervious cover limits been adopted to reduce impervious cover on a community or partial-community-basis?	No	No	Yes	No	Yes: Limits exist within watershed areas	Yes	No
GOAL: Manage the impacts at the source.							
Objective VII: Infiltrate precipitation as close as possible to the point it reaches the ground using vegetated conveyance and treatment systems.							
37. Have you amended regulations to require all development projects comply with LID pursuant to the <i>Rhode Island Stormwater Design and Installation Standards Manual</i> ?	Yes	Yes	Yes: Amendments pending that refer to Stormwater Manual (August 2013)	No	Yes	No	Yes
38. Have you revised regulations to allow and encourage LID vegetated treatment systems such as bioretention, swales, and filter strips to promote recharge and the treatment of runoff?	Yes	Yes	Yes: Amendments pending that refer to Stormwater Manual (August 2013)	No	Yes	No	Yes
Objective VIII: Break up or disconnect the flow of runoff over impervious surfaces.							
39. Have you amended regulations to encourage runoff to be diverted over pervious surfaces to foster infiltration, runoff reduction, and pollutant removal, where appropriate?	Yes	No	Yes: Amendments pending that refer to Stormwater Manual (August 2013)	No	Yes	No	Yes
Objective IX: Provide source controls to prevent or minimize pollutants in stormwater.							
40. Do you encourage or require appropriate pet waste disposal to prevent pet waste from entering stormwater runoff?	Yes	Yes	Yes	No	No	No	Yes
41. Are commercial and industrial developments required to sweep their impervious areas on an annual basis?	No	No: Required for pervious pavement	Yes	No	No: Review on a case by case basis	No	No
42. Is street sweeping done regularly on community streets to limit pollutant transport to waterbodies and reduce maintenance of catch basins?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
43. Are community road salt storage piles covered?	Yes	Yes	Yes	Yes	Yes	Yes	No

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	Richmond	Scituate	Smithfield (Esmond)	South Kingstown	Tiverton	Warren	Warwick
44. Has a community wastewater management district been adopted to encourage or require all onsite wastewater treatment systems be inspected and maintained regularly?	No	Yes	No	Yes	Yes	Yes	No
45. Have you adopted a stormwater utility district to manage the existing impacts of stormwater runoff?	No	No	No	No	No	No	No
Objective X: <i>Re-vegetate previously cleared areas to help restore groundwater recharge and pollutant removal.</i>							
46. Have regulations been adopted to encourage re-vegetation with native species, where possible?	Yes	Yes	No	No	No	No	No

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	West Greenwich	West Warwick	Westerly	Woonsocket
GOAL: Avoid the impacts of development to natural features and pre-development hydrology.				
Objective I: <i>Protect as much undisturbed open space as possible to maintain pre-development hydrology and allow precipitation to naturally infiltrate into the ground.</i>				
1. Has Conservation Development been adopted to protect open space and pre-development hydrology?	Yes	N/A	N/A	Yes
2. Has a transfer of development rights ordinance been adopted to provide an incentive for landowners to preserve natural lands?	No	N/A	No	No
3. Are limits of disturbance required to be marked on all construction plans?	Yes	Yes	Yes	No
4. Are there limits on lawn area for residential lots to protect open space?	No	Yes	No	No
5. Are undisturbed vegetative areas required on new lots as visual screens?	Yes	No	No	No
Objective II: <i>Maximize the protection of natural drainage areas, streams, surface waters, wetlands, and jurisdictional wetland buffers.</i>				
6. Do regulations require or encourage new lots to exclude freshwater and /or coastal wetland jurisdictional areas, to the extent practicable?	Yes	Yes	Yes	No
7. Do regulations direct building envelopes away from steep slopes, riparian corridors, hydric soils, and floodplains, to the extent practicable?	No	No	No	No
8. Has a community buffer program been created to establish or restore a naturally vegetated buffer system along all surface waters and wetlands to supplement and expand upon the minimum requirements of the DEM and CRMC programs, where applicable?	No	Yes	No	No
9. Are zoning setback distances flexible in residential districts to avoid requiring house lot locations to be unnecessarily close to surface waters, wetland, and riparian corridors?	No	No	No	No

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	West Greenwich	West Warwick	Westerly	Woonsocket
Objective III: Minimize land disturbance, including clearing and grading, and avoid areas susceptible to erosion and sediment loss.				
10. Has your community adopted an erosion and sediment control ordinance?	Yes	Yes	Yes	Yes
11. Did your community adopt a grading ordinance to require applicants to maintain as much natural vegetation as possible and limit clearing, grading, and land-disturbing activities to the minimum needed for construction maintenance and emergency services?	No	Yes	No	No
12. Has your community adopted a forest cover, tree protection, or tree canopy ordinance?	No	Yes	No	No
13. Do you require permits before removing trees on new or re-development sites?	No	No	No	No
14. Have minimum tree preservation standards been established for new development?	No	No	No	No
15. Do capital improvement plans include tree planting as part of project budgets?	No	No	Yes	No
16. Do you require that public trees removed or damaged during construction be replaced with an equivalent amount of tree diameter? (for example, if a 24-inch diameter tree is removed it should be replaced with six four-inch diameter trees).	No	No	No	No
Objective IV: Minimize soil compaction as a result of construction activities or prior development.				
17. Have you adopted provisions within land development regulations that prohibit the compaction of soils in areas needed for stormwater recharge?	No	No	No	No
18. Have you adopted requirements for construction site inspections to ensure that soils are not compacted?	No	No	No	No
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.				
19. Have LID landscaping standards been adopted that require the preservation of as much natural vegetation as possible and encourage low-maintenance native landscaping?	Yes	No	No	No
Objective VI: Minimize impervious surfaces.				
20. Did your community adopt compact growth ordinances such as conservation development, planned development, or mixed use development?	No	Yes	Yes	Yes
21. Has your community identified growth centers where increased density is appropriate and encouraged?	Yes	Yes	Yes	No

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
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Low Impact Development Objectives	West Greenwich	West Warwick	Westerly	Woonsocket
22. Are residential streets required to be as narrow as possible to accommodate traffic volumes without compromising safety?	Yes	No	Yes	No
22A. Do you require road widths of 22 feet or less for subdivisions of 40 or fewer homes or average daily trips less than 400?				
22B. Do you require road widths of 26 feet or less for subdivisions of 40-200 homes or average daily trips of 400-2,000?	Yes	No	Yes	No
23. Are street right-of-way widths required to be less than 45 feet?	No	No	No	No
24. Are driveway lengths and width required to be reduced to the extent possible with pervious surfaces and shared driveways encouraged wherever appropriate?	No	No	No	No
24A. Do you require driveways to be nine feet or less (one lane) and 18 feet or less (two lanes)?				
24B. Do you allow pervious surfaces to be used for residential driveways?	No	No	Yes	Yes
24C. Do you allow shared driveways to be used in residential developments?	Yes	No	Yes	Yes
25. Do you allow the flexibility with curbs in residential streets to encourage side-of-the-road drainage into vegetated open swales,, where possible?	No	Yes: In village zones	Yes	No
26. Where curbs are needed, do you allow opening in curbs that allow runoff to flow into swales?	Yes	Yes	Yes	No
27. Have flexible sidewalk design standards been adopted to limit impervious cover?	Yes	Yes: Only in village and gateway zones	No	No
27A. Is the minimum sidewalk width four feet or less?				
27B. Do you require sidewalks on one side of the street only in low-density neighborhoods?	No	Yes: Only in village and gateway zones	No	No
27C. Are sidewalks required to be gently sloped so that they drain into the front yard rather than the street?	N/A	No	No	No
27D. Can alternative pedestrian access such as trails or unpaved footpaths be used instead of sidewalks?	Yes	Yes	No	No
27E. Can pervious surfaces be used for sidewalks?	Yes	Yes	Yes	No
28. Did your community modify the dimension, design, and surface material of cul-de-sacs to reduce total impervious cover?	Yes	No	No	No
28A. Is the minimum radius allowed for cul-de-sacs less than 45 feet?				
28B. Can a landscaped island or native vegetation be within the cul-de-sac?	No	No	Yes	Yes
28C. Are alternative turnarounds allowed such as hammerheads or tees?	Yes	No	Yes	No
29. Have both minimum and maximum parking ratios been adopted to provide adequate parking while reducing excess impervious cover?	No	No	No: Min. but no maximum	No

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Low Impact Development Objectives	West Greenwich	West Warwick	Westerly	Woonsocket
30. Do you allow pervious materials to be used for parking areas and overflow parking?	Yes	No	Yes	Yes
31. Are parking ratios reduced if the site is served by mass transit or has good pedestrian access?	N/A	No	N/A	No
32. Is shared parking encouraged and implemented wherever feasible in order to reduce total impervious cover?	Yes	Yes: Only in village areas	Yes	Yes
33. Do off-site parking allowances exist to accommodate re-development and mixed-use compact growth?	N/A	Yes: Only in village areas	Yes	Yes
34. Are parking stalls and aisles reduced to the extent feasible in order to decrease total impervious cover?	Yes	Yes: Only in village areas	Yes	Yes
34A. Are the minimum stall dimensions nine feet wide by 18 feet long?				
34B. Is 20% or more of the parking lot required to have smaller dimensions (8 feet by 16 feet) for compact cars?	No	Yes: Only in village areas	No	No
35. Are parking lot landscaping requirements flexible and do they encourage LID techniques?	Yes	Yes	Yes	No
35A. Do parking lots of ten or more spaces require that 10% of the parking lot area be dedicated to landscaped areas that can include LID stormwater practices?				
35B. Is landscaping required within parking areas to "break up" pavement at fixed intervals?	Yes	Yes	Yes	No
35C. Is a 25-30% tree canopy coverage over on-site parking lots required?	No	No	No (5-10%)	No

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Low Impact Development Objectives	West Greenwich	West Warwick	Westerly	Woonsocket
36. Have impervious cover limits been adopted to reduce impervious cover on a community or partial-community-basis?	Yes	No	Yes	No
GOAL: Manage the impacts at the source.				
Objective VII: Infiltrate precipitation as close as possible to the point it reaches the ground using vegetated conveyance and treatment systems.				
37. Have you amended regulations to require all development projects comply with LID pursuant to the <i>Rhode Island Stormwater Design and Installation Standards Manual</i> ?	Yes	Yes	Yes	Yes
38. Have you revised regulations to allow and encourage LID vegetated treatment systems such as bioretention, swales, and filter strips to promote recharge and the treatment of runoff?	Yes	Yes	Yes	Yes
Objective VIII: Break up or disconnect the flow of runoff over impervious surfaces.				
39. Have you amended regulations to encourage runoff to be diverted over pervious surfaces to foster infiltration, runoff reduction, and pollutant removal, where appropriate?	No	Yes	Yes	Yes
Objective IX: Provide source controls to prevent or minimize pollutants in stormwater.				
40. Do you encourage or require appropriate pet waste disposal to prevent pet waste from entering stormwater runoff?	Yes	Yes	Yes	No
41. Are commercial and industrial developments required to sweep their impervious areas on an annual basis?	No	No	No	No
42. Is street sweeping done regularly on community streets to limit pollutant transport to waterbodies and reduce maintenance of catch basins?	Yes	Yes	Yes	Yes
43. Are community road salt storage piles covered?	Yes	Yes	Yes	Yes

DEM SURVEY OF MUNICIPAL LOW IMPACT DEVELOPMENT (LID) ORDINANCES
December 2013

Low Impact Development Objectives	West Greenwich	West Warwick	Westerly	Woonsocket
44. Has a community wastewater management district been adopted to encourage or require all onsite wastewater treatment systems be inspected and maintained regularly?	No	N/A	No	No
45. Have you adopted a stormwater utility district to manage the existing impacts of stormwater runoff?	No	No	No	No
Objective X: <i>Re-vegetate previously cleared areas to help restore groundwater recharge and pollutant removal.</i>				
46. Have regulations been adopted to encourage re-vegetation with native species, where possible?	No	No	No	No