

LID TOOL TRAINING

GOOD NEIGHBOR POLICIES



FIFTY-TWENTY ENGINEERING
50 20 ENGINEERING
RESOURCE GROUP INCORPORATED



DO NO HARM TO YOUR NEIGHBOR

Five things to reduce harm to your neighbor:

- 1) Employ green infrastructure practices to treat stormwater as close as possible to where it falls and permit the smaller infrastructure necessary to convey the reduced runoff and allow the decreased construction costs.
- 2) Retain the first one inch of runoff during any rain event.
- 3) Retain runoff from any 85th percentile storm; if not feasible, remove 80% of solids from runoff associated with that event
- 4) Protect the downstream channel by detaining runoff from any one-year rain event for 24 hours.
- 5) Demonstrate that flows are not increased downstream to a point where the site represents only 10% of the drainage area.

BALDWIN COUNTY (LID) / (GI) REGULATION

- Retain one-inch of stormwater runoff.
- Reduce suspended solids by 80%
- Reduce nutrient loading by 50%
- Qualify for 60-foot lot widths
- Must achieve a “best-fit” solution

The use of Low Impact Development Techniques (LID) and Green Infrastructure (GI) is encouraged for new developments. Where implemented, the design and integration of LID techniques shall promote the health, safety, and general welfare of the community and shall be designed to work in a complementary fashion with the proposed development drainage plan.

- (a) Where LID techniques are used in conjunction with the requirements of *Section 5.1.1* of these regulations, a Developer will qualify for reduced lot widths of 60 feet. The Applicant must verify that the proposed LID techniques retain the first one (1) inch of stormwater runoff, reduce suspended solids by 80%, and reduce nutrient loading by 50% to qualify for reduced lot widths.
- (b) Where implemented, LID techniques must be designed from an entire site development perspective by the Engineer of Record for the project. Practices shall be designed in accordance with the current *Alabama LID Handbook* and certified by a credentialed design professional. Selected LID techniques shall consider local rainfall data, soils, slopes, wetlands, and other natural features.
- (c) The Design Engineer shall work closely with the Baldwin County Planning & Zoning and Highway Departments for consideration of site constraints and LID technique selection to achieve a “best-fit” solution.
- (d) The development plans shall include inspection and maintenance schedules and details for each technique selected. Prior to the County’s final inspection, the Design Engineer shall provide certification that each technique was constructed as designed. The inspection and maintenance schedule shall be included in the development’s recorded O&M Plan.

Designer Name
Full Name

Development Name
Development Name

Development Location
Development Location

Most downstream BMP (BMP-A)

BMP-A
-- Select Option --

Volume provided by BMP (cubic feet)
0

Total Watershed (acres)
0

Impervious Watershed (acres)
0

Second-most downstream BMP (BMP-B)

BMP-B
-- Select Option --

Volume provided by BMP (cubic feet)
0

Total Watershed (acres)
0

Impervious Watershed (acres)
0

Third-most downstream BMP (BMP-C)

BMP-C
-- Select Option --

Volume provided by BMP (cubic feet)
0

Total Watershed (acres)
0

Impervious Watershed (acres)
0

Total Area (acres)		Target Water Quality Volume (cubic feet)	
0.00	Total Watershed	0	Runoff Water Quality Volume (RWQv)
0.00	Total Impervious	0	Water Quality Volume (WQv)

Runoff Reduction (cubic feet)		Pollutant Reduction	
0	BMP-A	0%	TSS
0	BMP-B	0%	N
0	BMP-C	0%	P
0% of Target RWQv Met		0%	N + P

Does not meet Runoff Reduction Target

Does not meet TSS Reduction Target

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GOALS

- Create a tool to report compliance
- Would be nice if:
 - Simplify complexities to the greatest extent practical
 - Website interface
 - Intuitive



SCAN ME

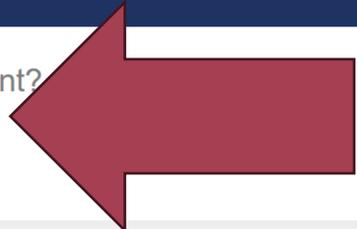
services.baldwincountyal.gov/lidtool

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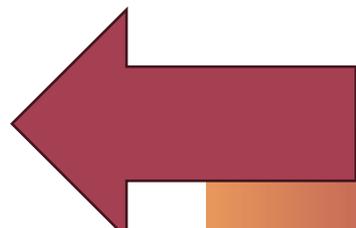


GOALS

- Create a tool to report compliance
- Would be nice if:
 - Simplify complexities to the greatest extent practical
 - Website interface
 - Intuitive



<https://bit.ly/LIDTool>



SCAN ME



Register

Test1 Files

Test1 – 260119 LID

Test 2



Designer Name:

Development Name:

Development Location:

1 What is your most downstream BMP (BMP-A)?

(Drop down menu)

2 What is the cubic feet of volume provided by BMP-A?

cf

3 How many total acres and impervious acres contribute to BMP-A?

0.0 acres (total) of watershed

0.0 acres impervious

4 What is your next upstream BMP (BMP-B)?

(Drop down menu)

5 What is the cubic feet of volume provided by BMP-B?

0 cf

6 How many total acres and impervious acres contribute to BMP-B?

0.0 acres (total) of watershed

0.0 acres impervious

7 What is your next upstream BMP (BMP-C)?

(Drop down menu)

8 What is the cubic feet of volume provided by BMP-C?

0 cf

9 How many total acres and impervious acres contribute to BMP-C?

0.0 acres (total) of watershed

0.0 acres impervious

0.0 ac impervious

0.0 ac watershed

0 cf Target RWQv - Runoff Water Quality Volume

0 cf Target WQv - Water Quality Volume

cf Runoff Reduction by BMP-A

cf Runoff Reduction by BMP-B

cf Runoff Reduction by BMP-C

0% Does not meet runoff reduction)

1.5 inches water quality event

0% TSS removal should be 80% or greater

0% N Credit

0% P Credit

0% N + P Credit

Does not meet runoff reduction

Does not meet TSS Reduction



Watershed: 5.0 AC
Impervious: 0.5 AC

BIO-
RETENTION
STORAGE
2,000 cf

Designer Name: Wade Burcham
Development Name: Test Project 1
Development Location:

1 Any Street, Roberstdale, AL
Project Area 1

1 What is your most downstream BMP (BMP-A)?

(Drop down menu)

2 What is the cubic feet of volume provided by BMP-A?

cf

3 How many total acres and impervious acres contribute to BMP-A?

0.0 acres (total) of watershed

0.0 acres impervious

4 What is your next upstream BMP (BMP-B)?

5 What is the cubic feet of volume provided by BMP-B?

0 cf

6 How many total acres and impervious acres contribute to BMP-B?

0.0 acres (total) of watershed

0.0 acres impervious

7 What is your next upstream BMP (BMP-C)?

8 What is the cubic feet of volume provided by BMP-C?

0 cf

9 How many total acres and impervious acres contribute to BMP-C?

0.0 acres (total) of watershed

0.0 acres impervious

0.0 ac impervious

0.0 ac watershed

0 cf Target RWQv - Runoff Water Quality Volume

0 cf Target WQv - Water Quality Volume

cf Runoff Reduction by BMP-A

cf Runoff Reduction by BMP-B

cf Runoff Reduction by BMP-C

0% Does not meet runoff reduction)

1.5 inches water quality event

0% TSS removal should be 80% or greater

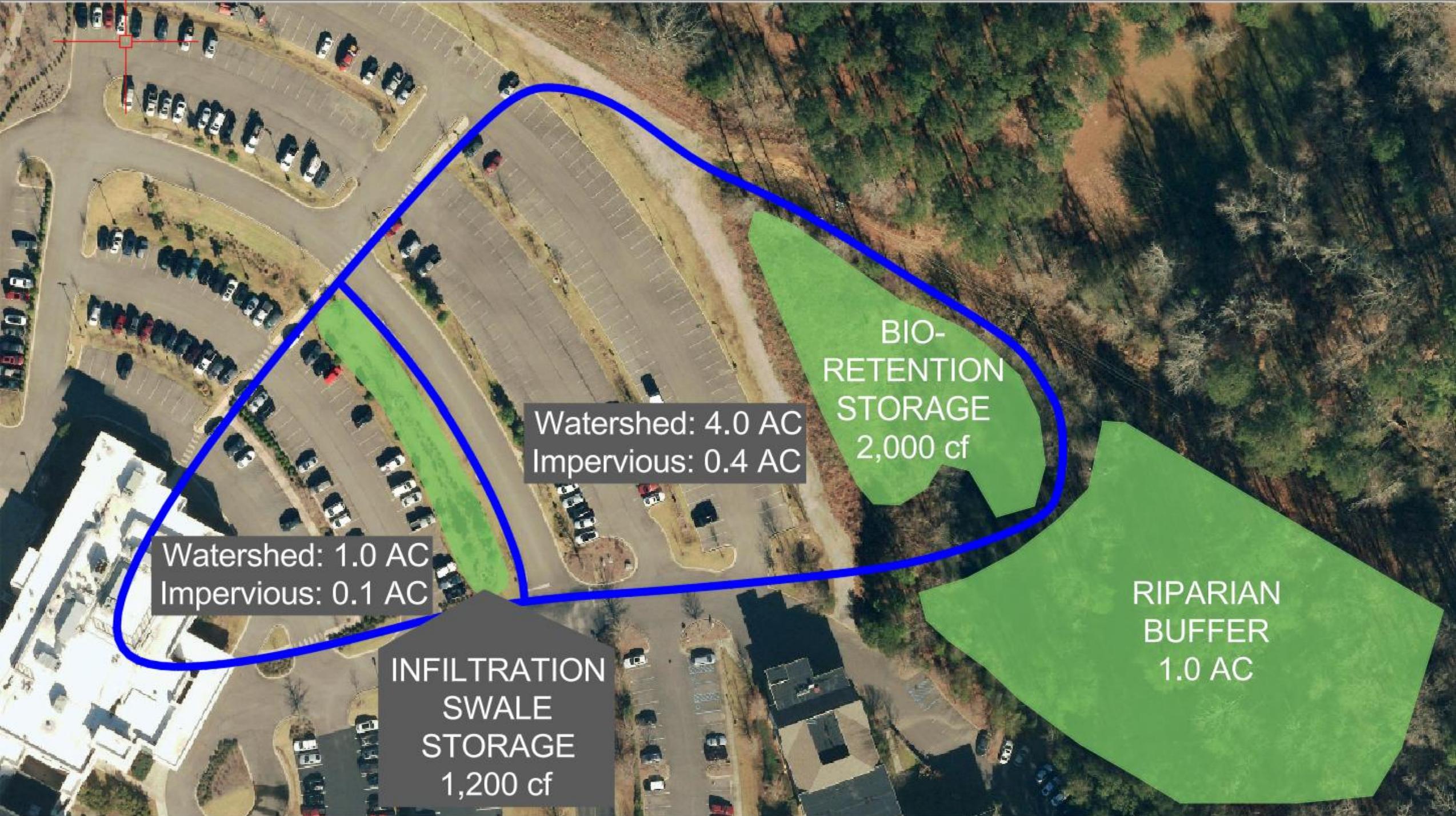
0% N Credit

0% P Credit

0% N + P Credit

Does not meet runoff reduction

Does not meet TSS Reduction



Watershed: 4.0 AC
Impervious: 0.4 AC

Watershed: 1.0 AC
Impervious: 0.1 AC

INFILTRATION
SWALE
STORAGE
1,200 cf

BIO-
RETENTION
STORAGE
2,000 cf

RIPARIAN
BUFFER
1.0 AC

Designer Name: Wade Burcham
Development Name: Test Project 1
Development Location:

1 Any Street, Roberstdale, AL
Project Area 1

- 1 What is your most downstream BMP (BMP-A)?
[Redacted] (Drop down menu)
- 2 What is the cubic feet of volume provided by BMP-A?
[Redacted] cf
- 3 How many total acres and impervious acres contribute to BMP-A?
[Redacted] 0.0 acres (total) of watershed
[Redacted] 0.0 acres impervious
- 4 What is your next upstream BMP (BMP-B)?
[Redacted]
- 5 What is the cubic feet of volume provided by BMP-B?
[Redacted] cf
- 6 How many total acres and impervious acres contribute to BMP-B?
[Redacted] acres (total) of watershed
[Redacted] acres impervious
- 7 What is your next upstream BMP (BMP-C)?
[Redacted]
- 8 What is the cubic feet of volume provided by BMP-C?
[Redacted] cf
- 9 How many total acres and impervious acres contribute to BMP-C?
[Redacted] acres (total) of watershed
[Redacted] acres impervious

0.0 ac impervious
0.0 ac watershed
0 cf Target RWQv - Runoff Water Quality Volume
0 cf Target WQv - Water Quality Volume

cf Runoff Reduction by BMP-A
cf Runoff Reduction by BMP-B
cf Runoff Reduction by BMP-C
0% Does not meet runoff reduction)
1.5 inches water quality event
0% TSS removal should be 80% or greater
0% N Credit
0% P Credit
0% N + P Credit

Does not meet runoff reduction
Does not meet TSS Reduction

THANK YOU



Wade Burcham



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Abbreviation	BMP Name	Sediment	N	P	Runoff	Reference
	BMP Name				Reduction	
BRC	Bioretention	80%	50%	60%	100%	a.,c. runoff reduction
CSW	Constructed Stormwater Wetland	80%	30%	40%	0%	a.,c. runoff reduction
PP	Permeable Pavement	99%	80%	80%	100%	b.,c. runoff reduction
GS	Grassed Swales	80%	50%	50%	10%	b.,c. runoff reduction
IS	Infiltration Swales	80%	50%	50%	100%	b.,c. runoff reduction
WS	Wet Swales	80%	50%	50%	0%	c.
LS	Level Spreader	50%	20%	20%	25%	a.,c. runoff reduction
GS	Grassed Filter Strips	50%	20%	20%	50%	a.,c. runoff reduction
RB	Riparian Buffer	85%	30%	40%	50%	a.,c. runoff reduction
References						
	a. City of Auburn, 2011 (As reported in the Alabama LID Handbook)					
	b. Roseen and Ballestero, 2008 - Porous Asphalt and City of Auburn, 2011 (As reported in the Alabama LID Handbook)					
	c. Georgia Manual, 2011 (As reported in the Alabama LID Handbook)					