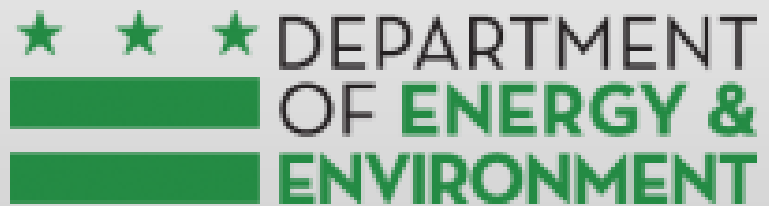




General Compliance Training



Agenda

- 9:00 – 9:15 Intro/Welcome
- 9:15 – 9:30 Chapter 2, including MSI and MLD
- 9:30 – 10:00 SWRv Calculations
- 10:00 – 10:30 CDA vs. SDA
- 10:30 – 10:45 Break
- 10:45 – 12:00 Chapter 3 Specifications
- 12:00 – 1:00 Lunch
- 1:00 – 1:30 Offv and SRCs
- 1:30 – 2:00 Plan Submittal Process and SWDB
- 2:00 – 2:30 Detention Example
- 2:30 – 3:00 PROW to the MEP

Objectives

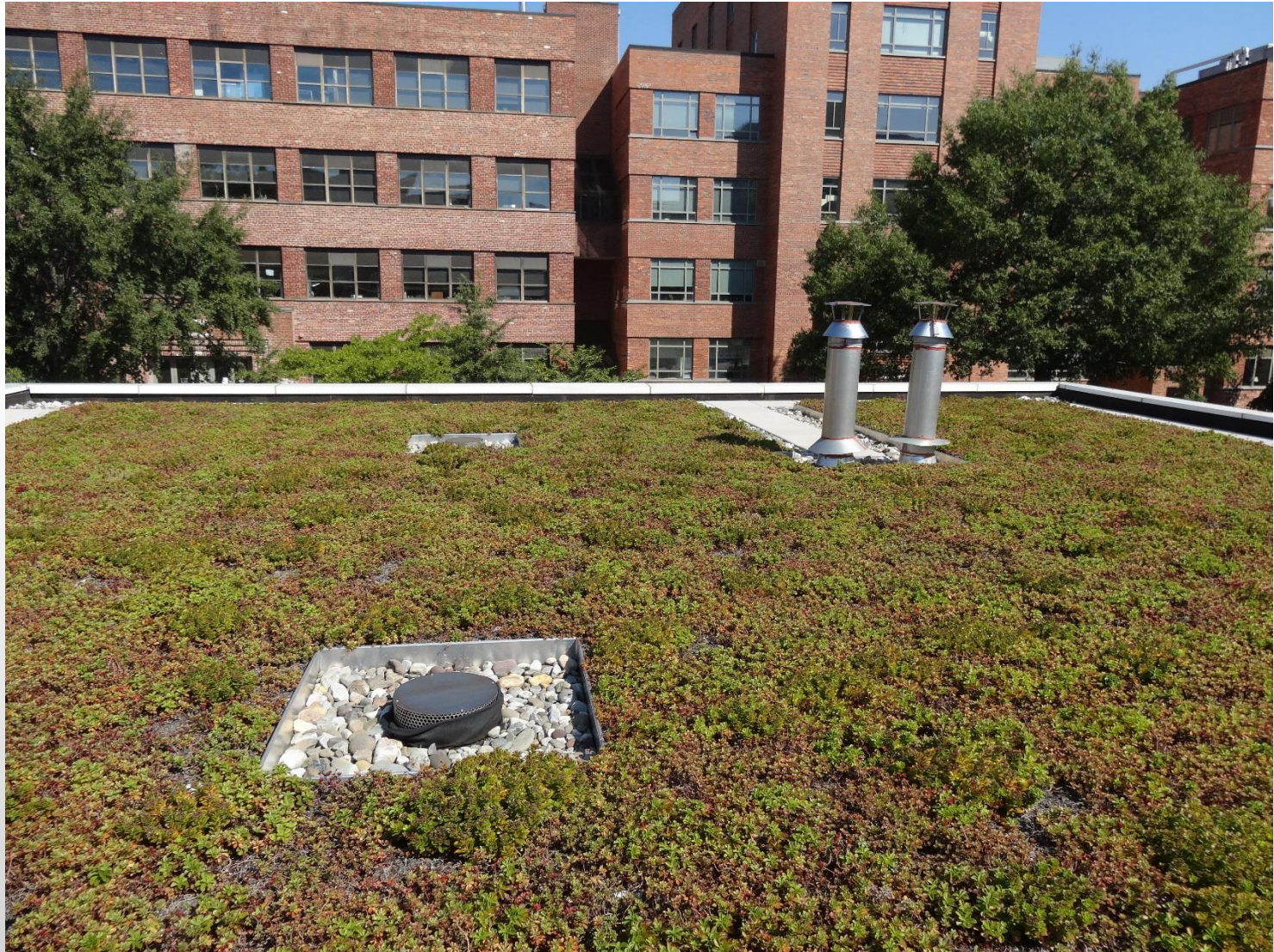
- Know when the stormwater rules apply
- Calculate the SWRv for a site
- Understand the difference between SDA and CDA
- Understand the basic concepts of the BMPs in the Guidebook and the important design specifications
- Understand PROW to the MEP
- Know what Offv is and how to comply
- Understand the overall process to have a plan approved
- Know what the SWDB is and how to access
- Understand when detention is required



Stormwater Management Requirements

Chapter 2

What is Retention and Why Do We Care?



Stormwater Retention Volume

$$\text{SWRv} = P/12 \times (Rv_I \times I + Rv_C \times C + Rv_N \times N) \times 7.48$$

- SWRv = Volume required to be retained on site (gal)
- P = Precipitation (in)
- $Rv_I = 0.95$ (runoff coefficient for impervious cover)
- $Rv_C = 0.25$ (runoff coefficient for compacted cover)
- $Rv_N = 0.0$ (runoff coefficient for natural cover)
- I = impervious cover surface area (sf)
- C = compacted cover surface area (sf)
- N = natural cover surface area (sf)

When Stormwater Rules Apply

Major Land-Disturbing (MLD) Activity

Activity that disturbs, or is part of a common plan of development that disturbs, 5,000 square feet or greater of land area, and either or both:

- a) Any portion of the pre-project land cover is natural; and/or
- b) 2,500 square feet or greater of the post-project land cover is impervious or BMP area.

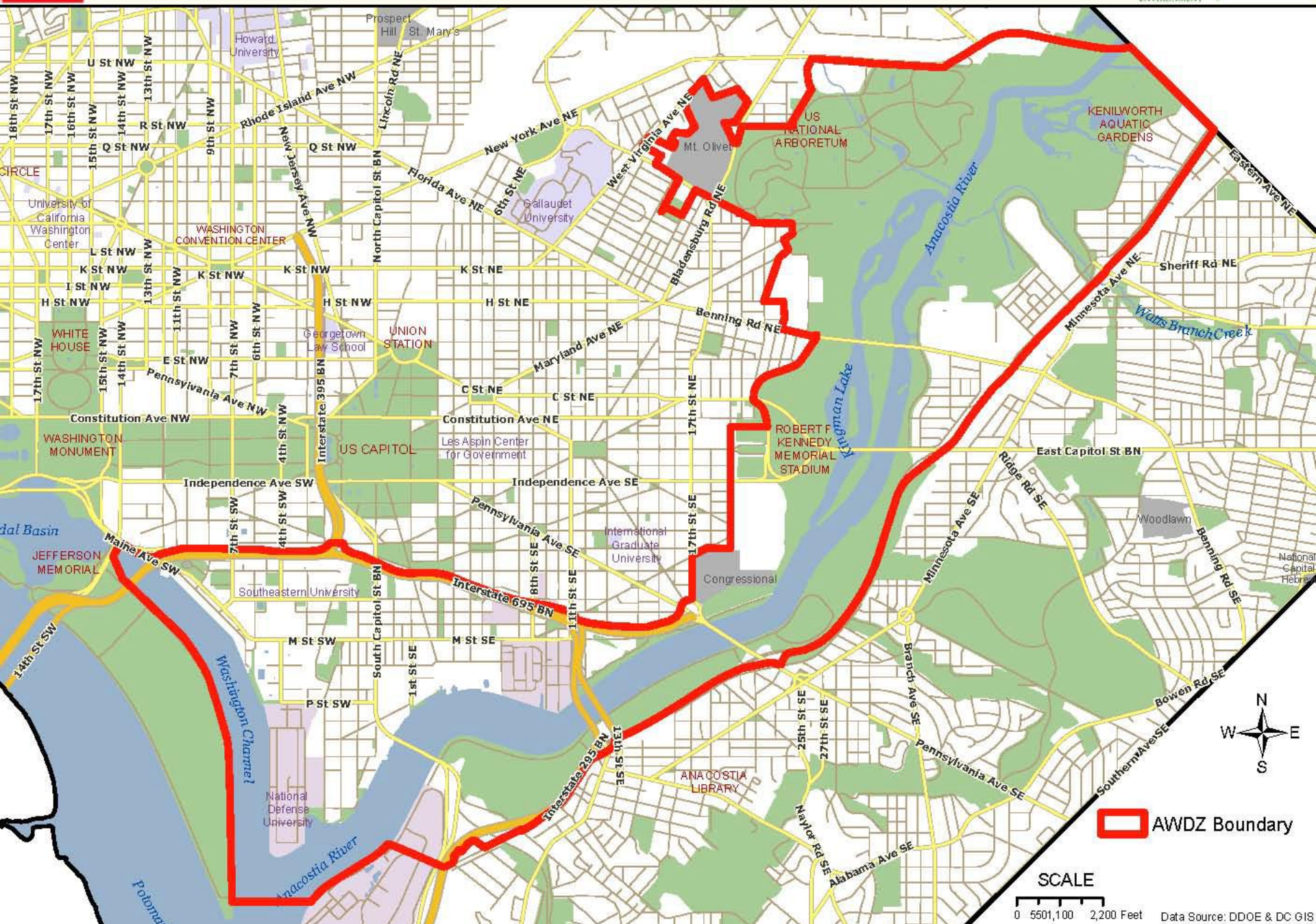
When Stormwater Rules are in Effect

Major Substantial Improvement (MSI) Activity

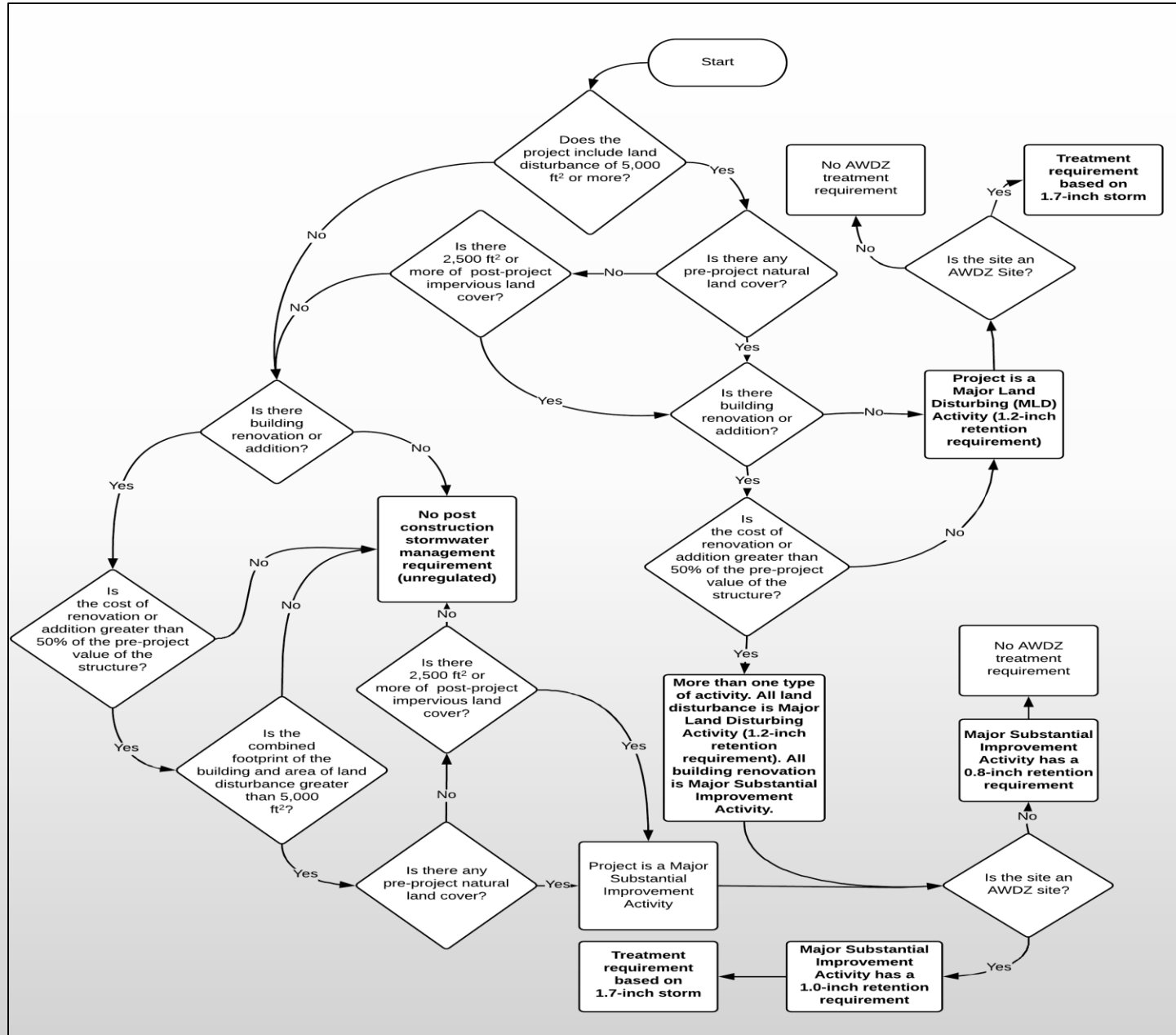
- Construction costs for building renovation/addition are greater than or equal to 50% of the pre-project assessed value of the structure.
- AND Combined footprint of structure(s) exceeding the cost threshold and any land disturbance are greater than or equal to 5,000 square feet, and either or both:
 - a) Any portion of the pre-project land cover is natural; and/or
 - b) 2,500 square feet or greater of the post-project land cover is impervious or BMP area.



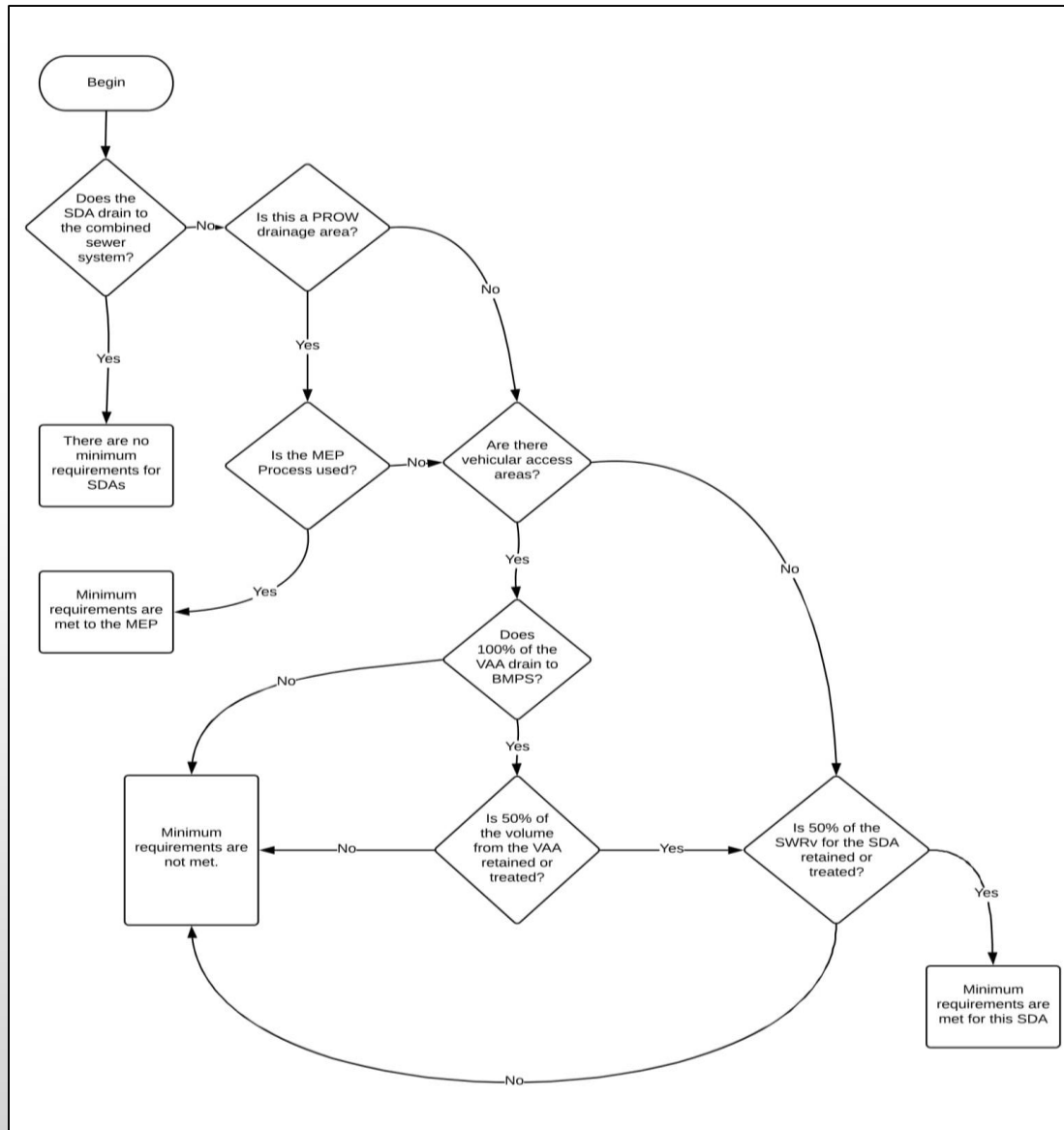
Anacostia Waterfront Development Zone (AWDZ)



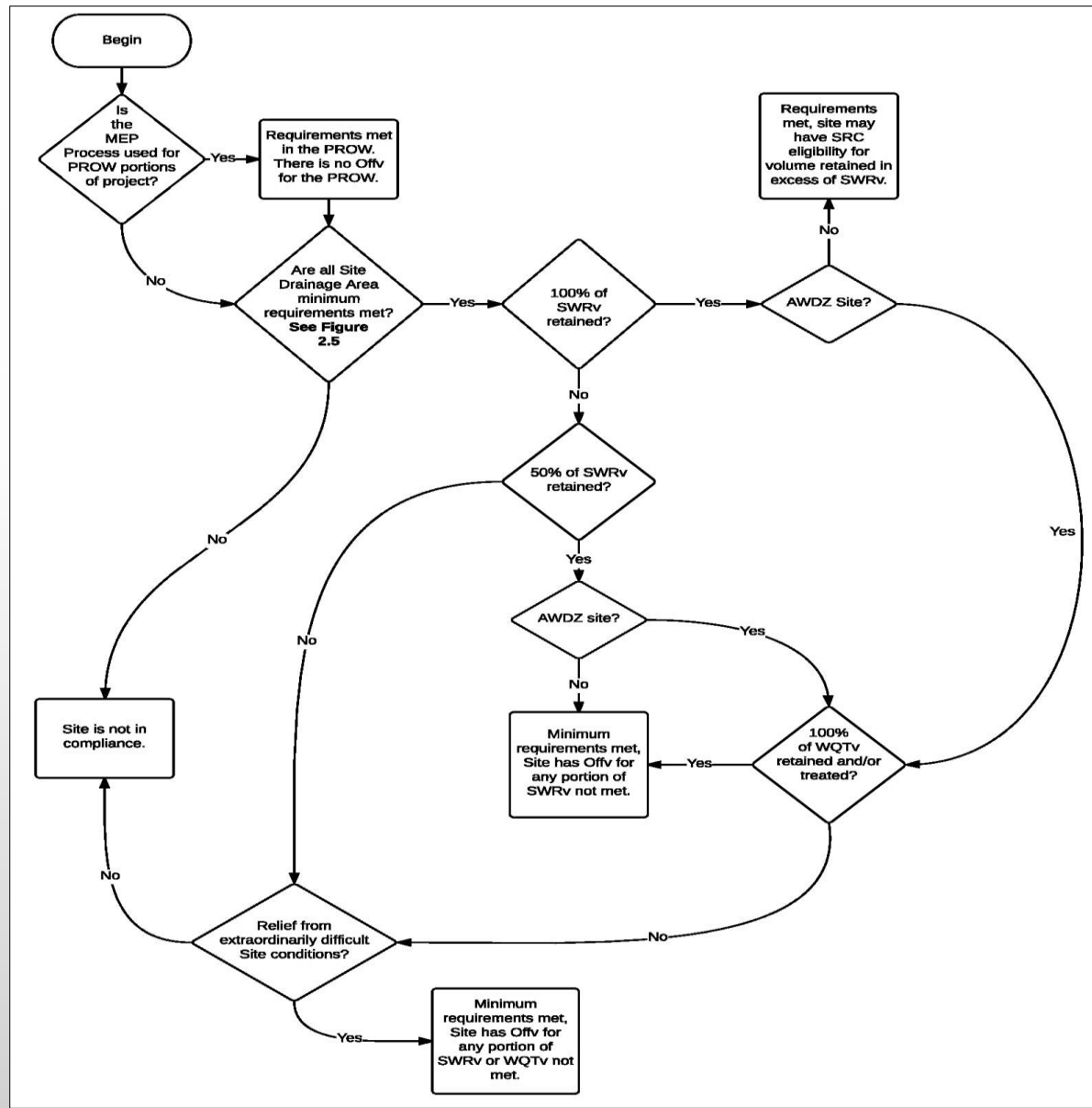
Determining the Regulatory Rain Event



Determining if the Minimum SDA Requirements Are Met

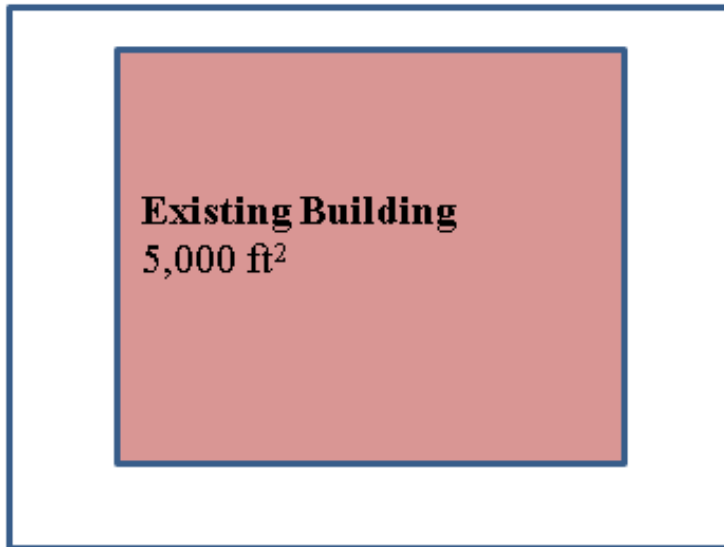


Determining if Minimum Retention and Water Quality Treatment Requirements Are Met



Examples of Major Substantial Improvement

Example 1 Site



Existing Building
5,000 ft²

Building Footprint = 5,000 ft²

Assessed Property Value = \$1,500,000

Renovation Cost = \$750,000

Percent of Property Value = 50%

Land Disturbance Area = 0 ft²

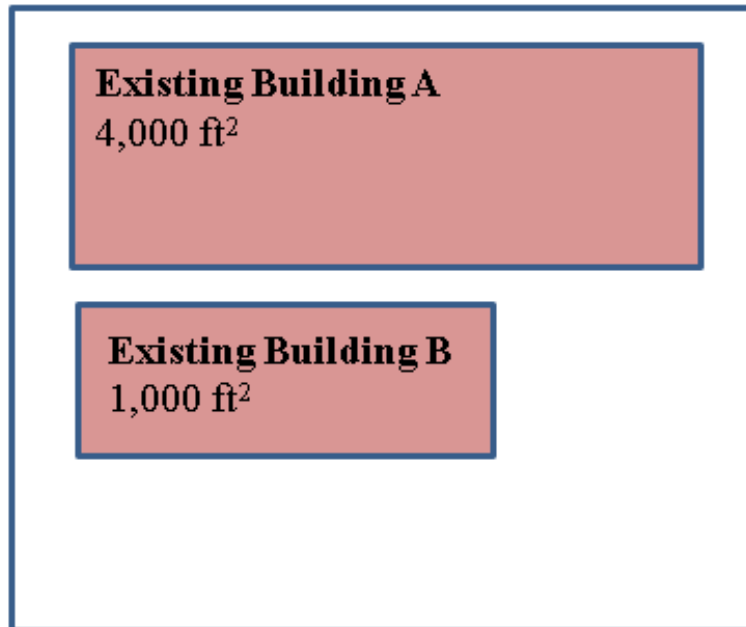
Total Project Footprint = 5,000 ft²

Activity Type = Major Substantial Improvement

SWRv Rainfall Depth = 0.8 inch

Examples of Major Substantial Improvement

Example 2 Site



Building A Footprint = 4,000 ft²

Assessed Property Value A = \$750,000

Renovation Cost A = \$500,000

Percent of Property Value A = 67%

Building B Footprint = 1,000 ft²

Assessed Property Value B = \$300,000

Renovation Cost B = \$175,000

Percent of Property Value B = 50%

Land Disturbance Area = 0 ft²

Total Project Area = 5,000 ft²

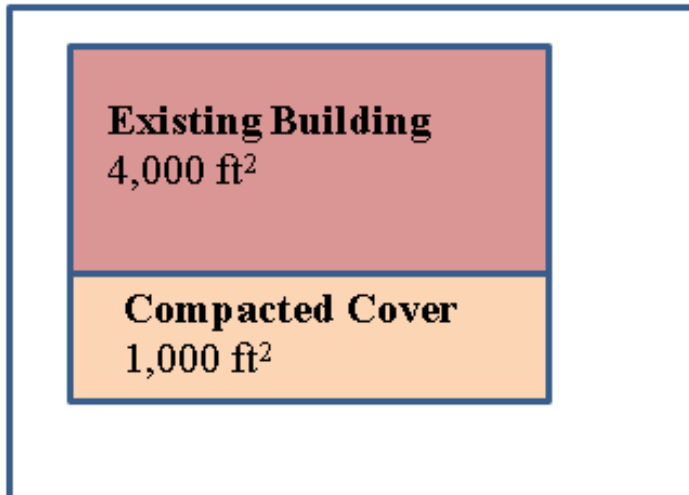
Stormwater Management is required:

Activity Type = Major Substantial Improvement

SWRv Rainfall Depth for Project = 0.8 inch

Examples of Major Substantial Improvement

Example 4 Site



Building Footprint = 4,000 ft²

Assessed Property Value = \$800,000

Renovation Cost = \$400,000

Percent of Property Value = 50%

Land Disturbance Area = 1,000 ft²

Total Compacted Cover Area = 1,000 ft²

Total Project Footprint = 5,000 ft²

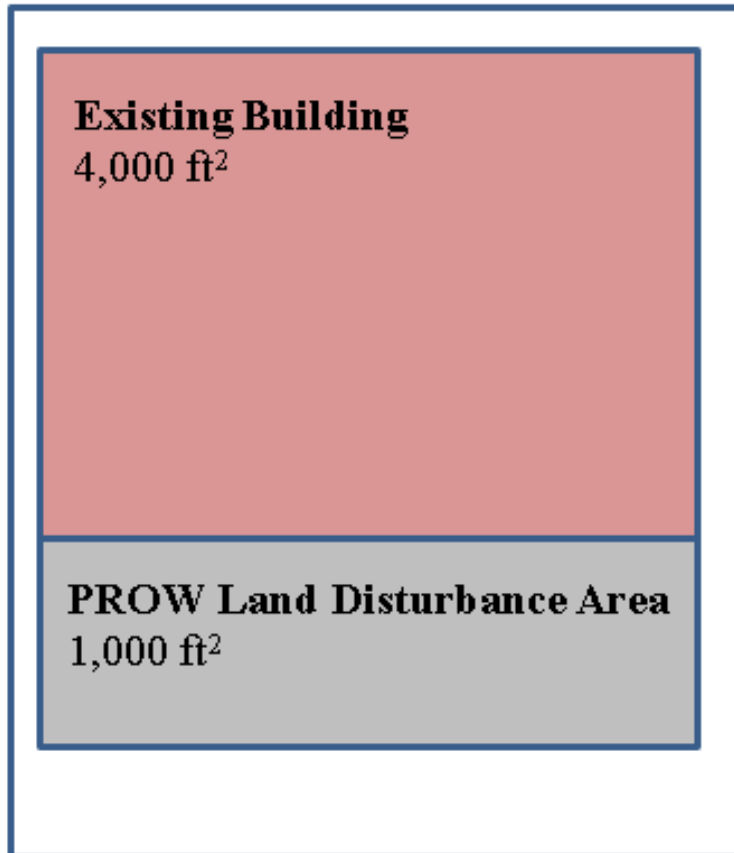
Post-Project Impervious cover = 4,000 ft² > 2,500 ft²

Activity Type = Major Substantial Improvement

SWRv Rainfall Depth for Project = 0.8 inch

Examples of Major Substantial Improvement

Example 9 Site



Building Footprint = 4,000 ft²

Assessed Property Value = \$700,000

Renovation Cost = \$350,000

Percent of Property Value = 50%

Land Disturbance Area = 1,000 ft²

(Includes PROW = 1,000 ft²)

Total Project Footprint = 5,000 ft²

Activity Type for Building =

Major Substantial Improvement

Activity Type for Land Disturbance =

Major Substantial Improvement

SWRv Rainfall Depth for Building = 0.8 inch

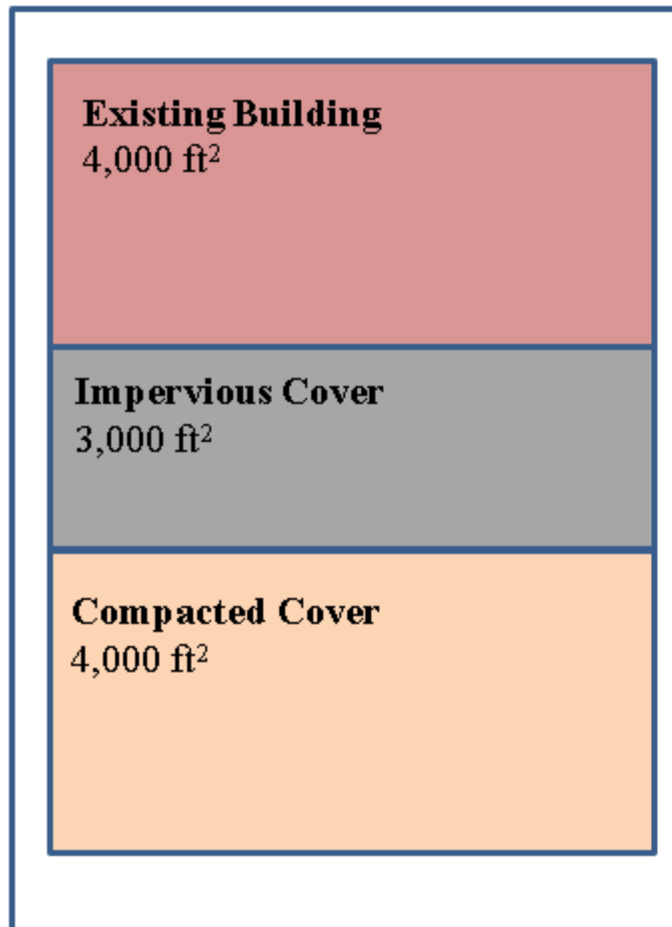
Building Area = 4,000 ft²

SWRv Rainfall Depth for PROW Land Disturbance = 0.8 inches (MEP)

PROW Land Disturbance Area = 1,000 ft²

Example of Major Substantial Improvement and Major Land Disturbance

Example 5 Site



Building Footprint = 4,000 ft²

Assessed Property Value = \$800,000

Renovation Cost = \$400,000

Percent of Property Value = 50%

Land Disturbance Area = 7,000 ft²

Total Compacted Cover = 4,000 ft²

Total Impervious Cover = 3,000 ft²

Total Project Footprint = 11,000 ft²

Activity Type for Building =

Major Substantial Improvement

Activity Type for Land Disturbance =

Major Land Disturbing

SWRv Rainfall Depth for Building = 0.8 inch

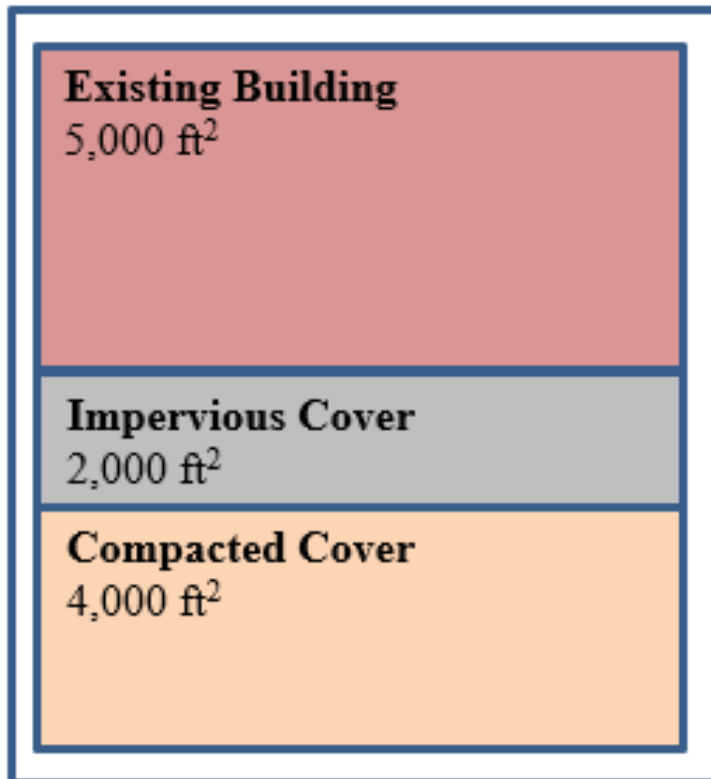
Building Area = 4,000 ft²

**SWRv Rainfall Depth for Land Disturbance =
1.2 inches**

Land Disturbance Area = 7,000 ft²

Example of No Stormwater Regulated Activity

Example 13 Site



Building Footprint= 5,000 ft²

Assessed Property Value = \$500,000

Renovation Cost = \$200,000

Percent of Property Value = 40%

Land Disturbance Area= 6,000 ft²

Total Compacted Cover = 4,000 ft²

Total Impervious Cover = 2,000 ft²

Total Project Footprint = 11,000 ft²

Activity Type for Total Project = N/A

Quantity Control Requirements:

- 2-year storm: control peak discharge to pre-development conditions.
- 15-year storm: control peak discharge to pre-project conditions.

Exemptions and Practicability

Exempt

- Detention for Major Substantial Improvement
- Disturbance for BMP Installation
- Athletic Playing Fields, Permeable Athletic Tracks, and Permeable Playground Surfaces
- Utility Work

Practicable Process

- Affordable Housing
- Trails
- Small Structures at Parks