

Chapter 1 – Introduction

Exemptions from the Manual

- Additions or modifications to existing single-family structures
- Developments that do not disturb more than 5000 square feet of land or
- Agricultural land management activities
- An individual single house

Chapter 2 – Hydrology

- SCS Method *only* for design of storage facilities.
- Rational/SCS Method only for culvert design.
- Water Quality volumes should be obtained using the worksheets located at www.spaldingcounty.com/storm-water/spaldingstormwaterhome.htm

Storm Duration		Rainfall (inches)					
Hours	Minutes	2-year	5-year	10-year	25-year	50-year	100-year
24	1440	4.08	5.04	5.76	6.72	7.2	7.92

Chapter 3 – Storm Drainage System Design

- Cross Drains for major systems shall be designed for the 100-year storm event, all other stormwater systems need to be designed to the 25-year storm event and show the 100-year hydraulic grade line.
- The minimum pipe size is 18 inches.
- The minimum slope for all pipes is 1%.

Chapter 4 – Culvert Design

- Acceptable Pipe Materials; Reinforced Concrete (RCP), Corrugated Metal (CMP) and Bituminous Coated Metal Pipe (BCCMP).
- Cross Drains for major systems shall be designed for the 100-year storm event, all other stormwater systems need to be designed to the 25-year storm event and show the 100-year hydraulic grade line.
- The maximum slope using RCP is 10% and for BCCMP and CMP is 14%. HDPE Pipe is **not** allowed.
- Maximum drop in a drainage structure is 10 feet.
- The maximum allowable velocity for corrugated metal pipe is 15 feet per second.

Chapter 5 – Open Channel Design

- Channels with bottom widths greater than 10 feet shall be designed with a minimum bottom cross slope of 12 to 1, or with compound cross sections.
- Channel side slopes shall be stable throughout the entire length and side slope shall depend on the channel material. A maximum of 2:1 should be used for channel side slopes, unless otherwise justified by calculations. Roadside ditches should have a maximum side slope of 3:1

- Open channel drainage systems are sized to handle a 25-year design storm. The 100-year design storm should be routed through the channel system to determine if the 100-year plus applicable building elevation restrictions are exceeded, structures are flooded, or flood damages increased.

Chapter 6 – Storage Design

- All storage facilities shall be designed to detain the 100, 50, 25, 10, 5, 2-year storm events.
- A minimum of 1.5 feet of free board is required on all ponds if 1.5 feet of free board is unattainable, a 100-year spillway shall be constructed.
- Maximum interior slopes of the pond shall be 2:1
- Maximum exterior slopes of the pond shall be 3:1
- Pond dams shall be a minimum of 8 feet wide, unless circumstances allow for a smaller dam.
- A timing study may be conducted if the project is in the lower 1/3 of the basin and follows the 10% rule.
- No Circular orifice shall be less than 3 inches.

Chapter 7 - Energy Dissipation Design

- All pipe discharges shall have a rip-rap apron designed to facilitate the 25-year storm event.

Chapter 8 – Water Quality

- Water Quality is needed for any development or redevelopment over 5000 sq. ft.
- Water Quality, Orifice Design, and Site Review spreadsheets can be downloaded at <http://www.spaldingcounty.com/storm-water/spaldingstormwaterhome.htm>.

