

Deerfield Regional Storm Water District

Storm Water System Evaluation and Management Plan

March 13, 2007



Purpose

A storm water system evaluation and management plan (the Plan) should define how to protect Deerfield Township (Township) from:

- ◆ storm sewer flooding,
- ◆ existing and future stream flooding,
- ◆ stream bank erosion, and
- ◆ water quality degradation.

Approach

The Plan would be supported by a credible storm water model of the Township that can assist in developing solutions that are accurate and acceptable to the public. The Plan should consist of the following:

1. physical representation of the storm water system;
2. witness testimonials to flood elevations and associated rainfall;
3. a storm water system model that accurately represents flooding and erosion issues – past, present and future;

Approach (cont.)

The Plan should consist of the following:

4. build consensus around a cost effective level of service for improvements – water quantity and quality;
5. prepare detention rules and other policies that minimize new flooding and erosion by runoff from development and re-development projects; and

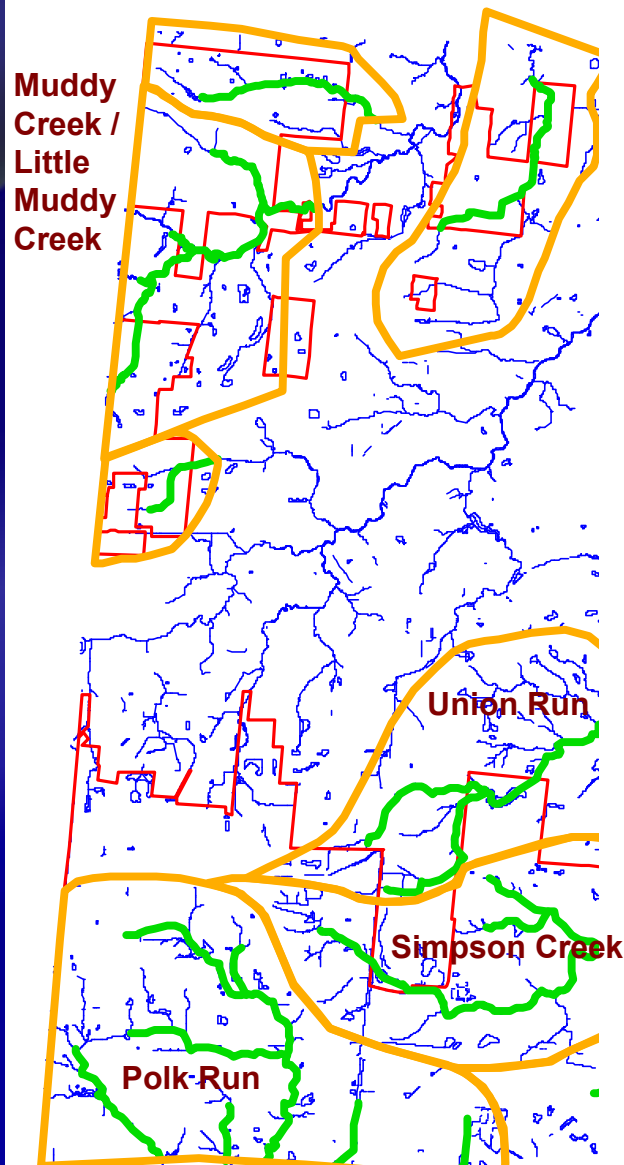
Phased Plan Implementation

Phase I: Develop a model of the primary drainage system and watershed-specific detention rules that prevent increases in existing water surface elevations.

Phase II: Extend the model into portions of the secondary drainage system and quantify known and model-projected storm water problems.

Phase III: Develop conceptual designs for capital improvements to resolve existing and prevent future drainage problems.

Anticipated model coverage



Muddy
Creek /
Little
Muddy
Creek

Union Run

Simpson Creek

Polk-Run

Little Miami
River
Tributary A

Little Miami
River
Tributaries
B and C

CDM



Storm Water System Evaluation & Management Plan Planning Level Budget Estimates

Task	Watershed					Total	
	Simpson Creek	Polk Run	Union Creek	Little Miami R.	Muddy / Little Muddy Creek	Conducted Separately	Conducted as One Project
Phase I - Develop Policies and Detention Rules							
Subtotal	\$58,800	\$52,900	\$29,400	\$58,800	\$70,500	\$270,400	\$216,300
Phase II -- Evaluate Flooding and Erosion Problems							
Subtotal	\$57,400	\$51,600	\$28,700	\$57,400	\$68,900	\$264,000	\$211,200
Phase III -- Develop Capital Improvement Plan							
Subtotal	\$47,300	\$42,500	\$23,600	\$47,300	\$56,700	\$217,400	\$173,900
Total (Conducted Separately)	\$163,500	\$147,000	\$81,700	\$163,500	\$196,100	\$751,800	\$601,400
Total Conducted as One Project	\$130,800	\$117,600	\$65,400	\$130,800	\$156,900	\$601,400	

Depending on the results of each phase, the costs associated with subsequent phases are subject to change.

