What is inflow and infiltration?

Inflow and infiltration are terms used to describe the ways that groundwater and stormwater enter the sanitary sewer system.

Inflow is water that is dumped into the sewer system through improper connections, such as downspouts and groundwater sump pumps.

Infiltration is groundwater that enters the sewer system through leaks in the pipe.

*All of this water is called **"clear water"** (although it may be dirty) to distinguish it from sanitary sewage.*

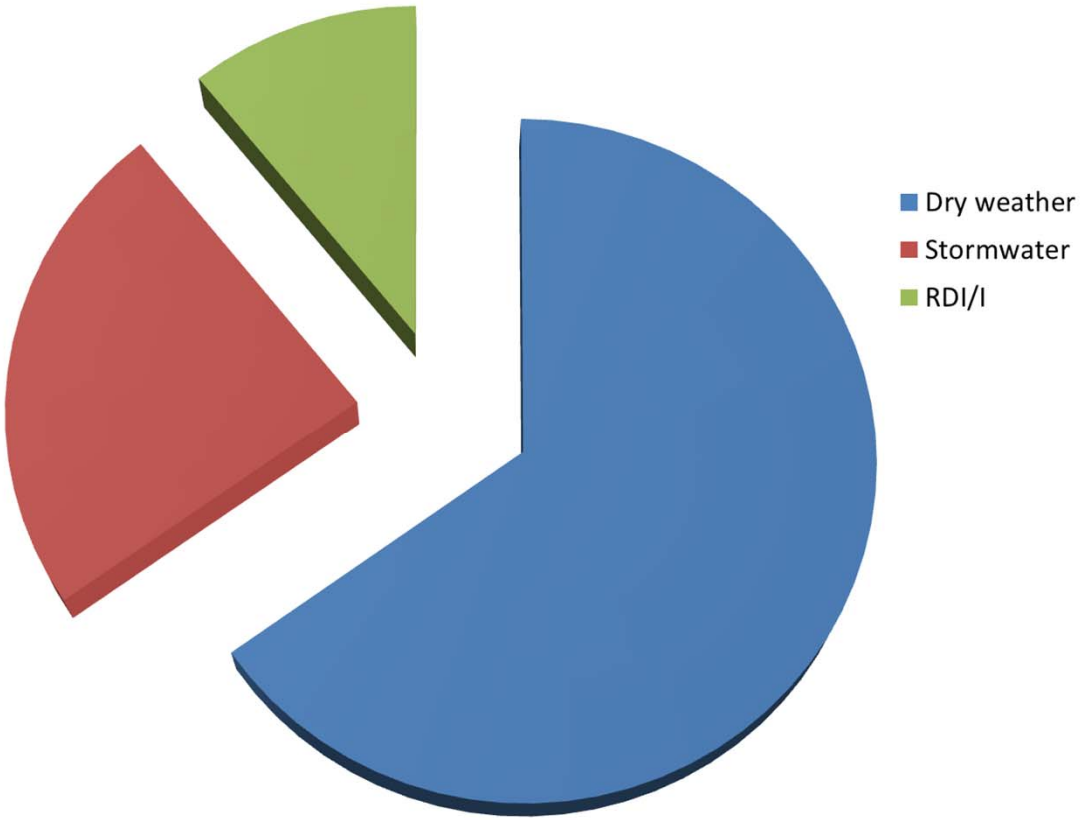
How is I/I allocated in the Rate Model?

- I&I is determined based on “units of service”
  - Difference between the measured flow that comes into facility through flow monitoring vs customer billed volume or contributed volume
- I&I is allocated on an individual connection basis
  - 75% of the I&I volume is allocated to customer classes based on total estimated customer equivalent connections (ratio of size of connection (ie. meter size) with the remaining 25% allocated on the basis of contributed volume

Example comparison of Revenue & Runoff Generation

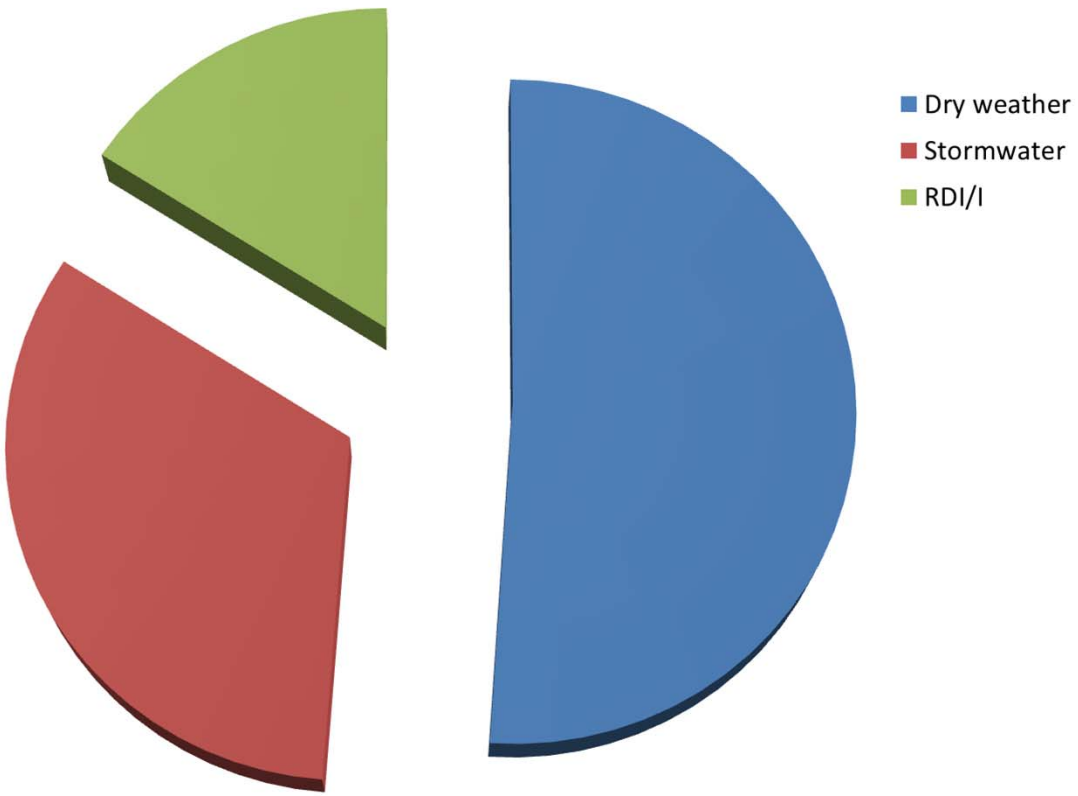
	Commercial Retail Strip Center/Site	Commercial Retail Strip Center/Site	Residential Site
Land use	18 acre site (11 acres parking lot with 7 acre building)	23 acre site (15acres parking lot with 8 acre building	0.25 acre single family home
Est. Sewer billed volume/month	1385 cubic feet/month	3143 cubic feet/month	1407 cubic feet/month
Monthly Bill	$755 (Est. cost of site with 4 meters)	$1,168 (Est. cost of site with 4 meters)	$110 (Est. cost residential property with 5/8” meter)

Mill Creek Watershed



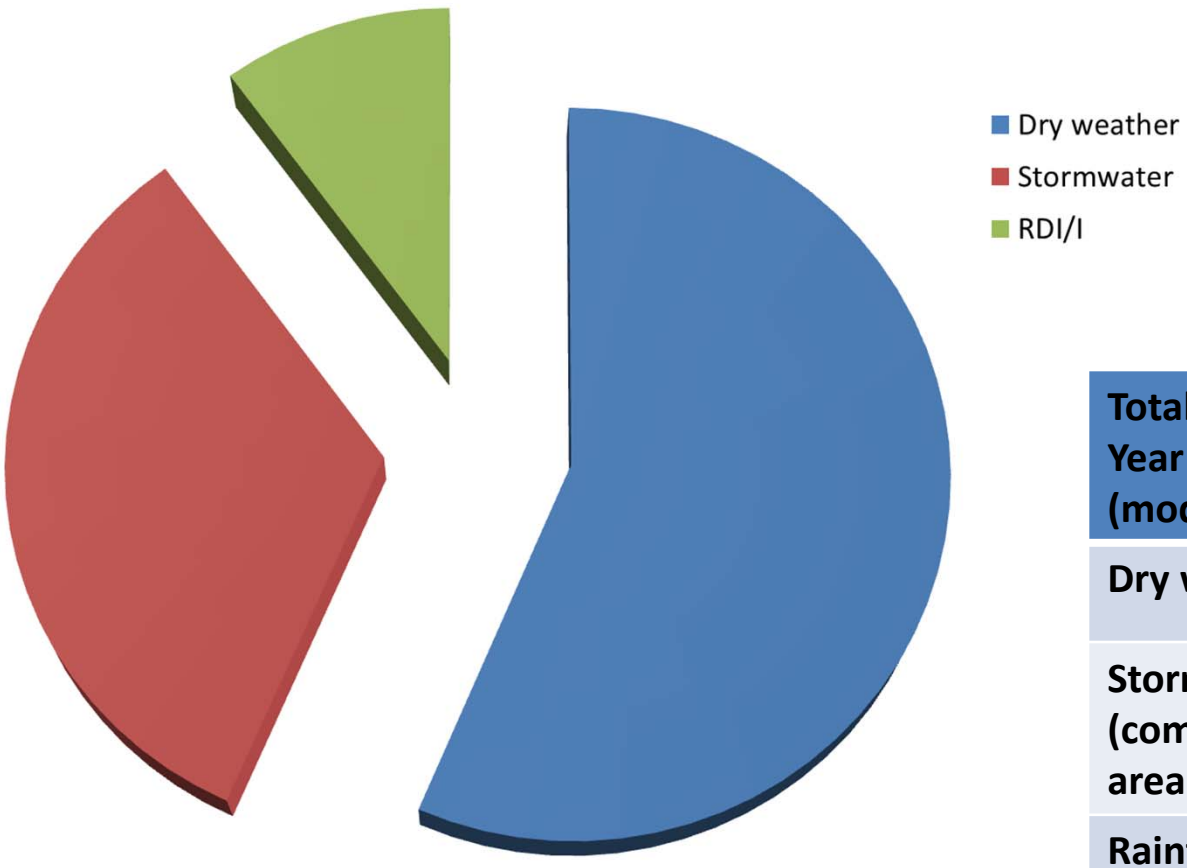
Total Typical Year Flow (modeled)	43.1 billion gallons (BG)
Dry weather	28.1 BG
Storm water (combined area)	10.3 BG
Rainfall Dependent I/I (sanitary area)	4.7 BG

Little Miami Watershed



Total Typical Year Flow (modeled)	13.1 billion gallons (BG)
Dry weather	6.7 BG
Storm water (combined area)	4.3 BG
Rainfall Dependent I/I (sanitary area)	2.1 BG

Muddy Creek Watershed



Total Typical Year Flow (modeled)	6.9 billion gallons (BG)
Dry weather	3.9 BG
Storm water (combined area)	2.3 BG
Rainfall Dependent I/I (sanitary area)	0.7 BG