



*Sliicer.com® is the online I/I Answer Engine for wet and dry weather analyses that improves decision making and lowers project costs.*

## Sliicer.com

Sliicer.com is a powerful set of online engineering tools designed for both the consulting and municipal engineer. These tools extract rigorous Dry & Wet Weather Performance measurements from sewer flow and rain data in 1/10th the time of other analysis tools. We have codified what we have learned in conducting Rainfall Dependent Infiltration Inflow (RDII) studies over the last 20 years into Sliicer.com, which won the WEF Innovative Technology Award in October, 2009. Key outputs from Sliicer.com are described below.

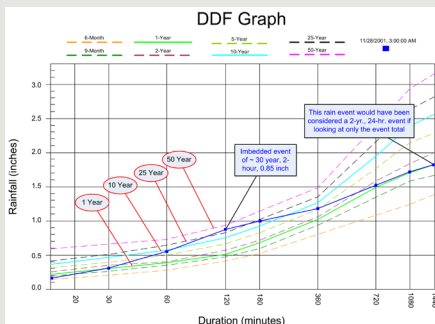
### Municipal Engineers

Answer wet weather questions and validate rehab decisions in seconds with Sliicer.com. Through flow data analyses, calculate 'what-ifs'; incorporate Scattergraph tools; assess the operational capacity of pipes; diagnose upstream and downstream SSOs; and animate the pipe's performance in rain events, all with speed and precision. With 'human-viewing-speed graphics' Sliicer.com includes pre- and post-rehabilitation analyses, long term analyses and wet weather analyses featuring Rainfall Depth-Duration-Frequency (DDF), Scattergraph, Storm-by-Storm RDII, System-wide RDII, and Q vs. i analyses.

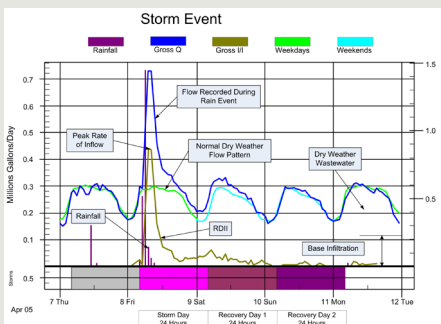
### Consulting Engineers

Make ADS your wet weather expert and partner for I/I removal projects with Sliicer.com. As a bench mark of speed, in under 5 minutes Sliicer.com processes eight year's of data from 35 flow meters and generates dry day measurements by calendar quarter (32) and storm calculations for 375 storms. It generates repeatable data in seconds, reducing expensive labor and answering questions about wastewater collection system performance. (These powerful online tools automate 33 industry-accepted dry and wet weather calculations and help keep you focused on engineering tasks, while alleviating tedious spreadsheet calculations.)

## Simple Questions. Difficult Analyses. Fast Answers.



Rainfall Depth-Duration-Frequency analysis shows how a storm behaved and can help explain the cause of overflows.



Time series data reveal information about the quantity of flow generated by the system upstream of the monitor.



## About ADS

ADS Environmental Services®, a brand of ADS® LLC, is a leading technology and service provider and a reliable source of knowledge to the global wastewater collection system industry. Monitors manufactured, installed, and maintained by ADS measure over 4 billion gallons of flow daily across the globe. ADS delivers value to its customers by providing industry-leading solutions for flow monitoring, data analysis, reporting and field services. These customers rely on Underground Intelligence® from ADS to manage planning and rehabilitation, satellite community billing, regulatory compliance, O&M, and model calibration.



## FEATURES

### Rainfall Analysis

Every collection system manager has a good idea of how much rainfall is required before problems occur in their system. But some rains just don't produce consistent responses in the sewer. The DDF display (Depth-Duration-Frequency) allows the manager to immediately "see" how the storm behaved. What might appear to be a small 2-year, 24-hour storm could actually be a 30-year, 2-hour storm. This analysis can be performed in seconds for each rain gauge and for each storm.

### RDII Calculations

One of the most tedious operations in conducting a wet weather study is the calculation of RDII for each storm and each meter. The rainfall for each calculation is often a blend of several rain gauges. As a benchmark, for a 10-month RDII study with 132 flow meters and 7 rain gauges, Sliicer.com processed all meters for 20 storms, and calculated rainfall for each meter basin using the Inverse Distance Squared method, in just 28 minutes. In addition, the dry day values and RDII values are separated into Winter and Summer seasons.

### Q vs. i Relationships

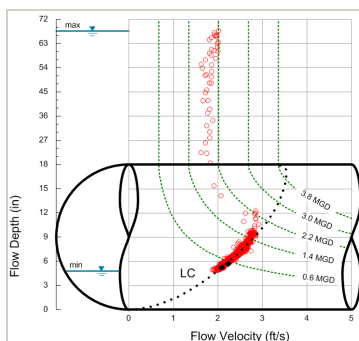
The rainfall-to-flow relationship is the key performance indicator of each wastewater sewer catchment in the collection system. It measures the "yield" or the amount of I/I generated in a basin. Tracking this yield can reveal one of the first "indicators of change" that a manager may see in the system. Analyzing Q vs. i relationships for several storms before and after an event make this a very effective evaluation. Managers also use Q vs. i relationships to quantify the impact of sewer rehabilitation projects.

### Scattergraph Analysis

The Scattergraph is a useful 'human-viewing-speed graphic' that can reveal the hydraulic conditions in a sewer. They are used to determine both the theoretical and operational capacity of the sewer, spot SSO's, quantify the overflow volume and animate the pipe's performance in rain events.

### RTK Solver

A new RTK solver with an intuitive graphical interface allows users to 'see' how well the RTK solution fits the data. Separate RTK solutions are produced by season. The RTK graphical interface is not available in the EPA SSOAP tool box.

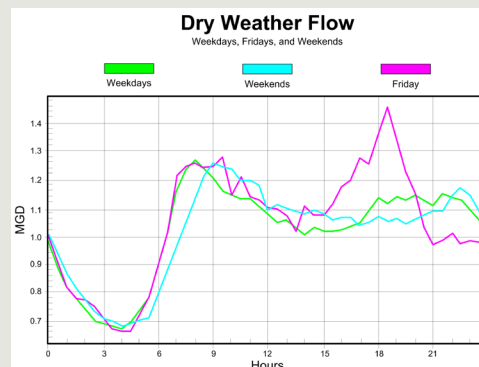


The Scattergraph shown at the left is equipped with iso-Q lines (lines of constant flow rate) and shows that this pipe actually carries 60 percent of its design capacity and is surcharged to a depth of 70 inches. This operational capacity can change over time, and being able to quantify operational capacity is key to spotting "lurking problems."

Add Sliicer.com and ADS to your winning team and gain the edge that wins the job, saves time, increases profitability, and answers more wet and dry weather analyses questions.

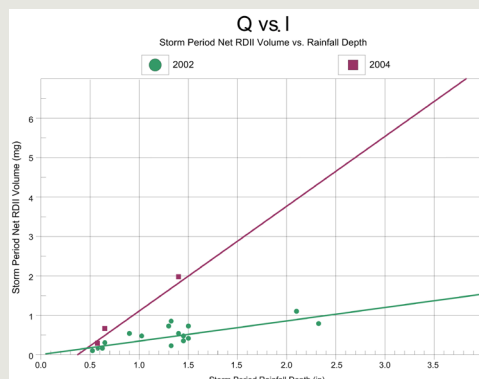
*"You have to see it to believe it!"*  
Sign up for a Free Trial at [www.sliicer.com](http://www.sliicer.com).

## ENGINEERING TOOLS



### Dry Weather Flow Analysis

Dry weather flow is a critical component of calculating RDII and can also be exported to hydraulic models.



### Q vs. i Analysis

The Key Performance Indicator of a sewershed. Changes in these plots identify and quantify RDII reductions due to sewer rehabilitation. In this case the 2004 deterioration in performance was due to a bridge contractor connecting a storm sewer to the sanitary sewer.

# ADS<sup>®</sup>

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