

# Environmental Discharge Monitoring

Discharge Monitoring System For Closed Channel and Open Channel Flowmeters Using Flow Computer (SUPERtrol-I)



## General

The SUPERtrol-I (ST1) can be used as the core of an Environmental Discharge Monitoring System. It can be used with closed channel and open channel flowmeters and provide for automatic reporting for environmental discharge points.

## Introduction

A Point Source Pollution Discharge Permit is one where there is a specified location where discharge leaves a plant and enters the environment. Environmental Discharge permits frequently limit the DAILY DISCHARGE to a predefined maximum limit.

## Printed reports are required.

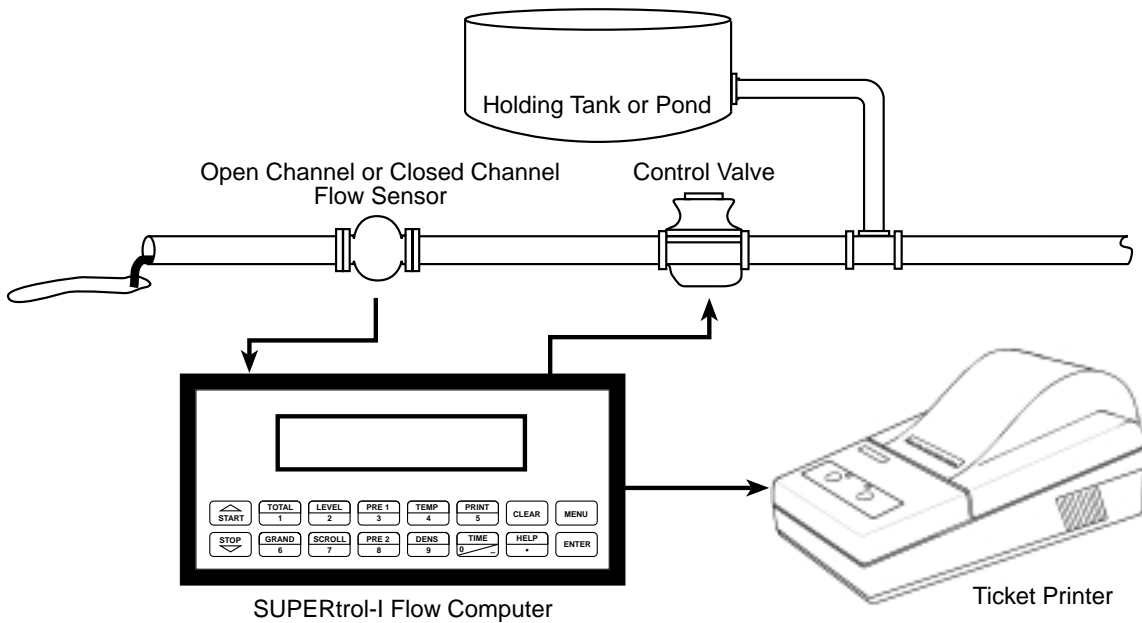
There is a record keeping requirement that must be observed. Information typically required would be: Site Name, Site Location, Discharge Permit Number, Discharge Description, Permit Limit Amount  
A Daily Discharge report would include the above plus: Time, Date, Actual Daily Discharge, Accumulative Discharge

If an amount greater than the permitted daily discharge is encountered it may be desirable to redirect the flow into a tank or pond to hold it until the start of the following day. Backup data logging is advantageous in event of a problem with the printer.

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## Solution

The ST1 Solution to implementation of a Environmental Discharge Monitoring:

- 1) Setup the instrument to operate with your flow meter of choice for your application.
- 2) Setup the Print Header with the key information to be included in the daily discharge report.
- 3) Setup the printout attributes to include the desired formatting:
  - Number of blank lines on the top
  - Include the print header
  - Include the time, date, daily discharge permit allowance, actual daily discharge, accumulative discharge
- 4) Specify the length of the form
- 5) Setup the time of day when you want this report to be issued each day. Also set the "Clear Total after Print" selection to "YES". The daily totalizer will clear after datalogger and printing each day then begin again.

If this application also has a Daily Discharge Limit and you want the ST1 to close a valve just before the daily discharge limit is reached, and then open it again when the new daily cycle has begun, then setup one of the relays as follows:

- 1) Assign the RELAY USAGE to TOTAL
- 2) Assign the RELAY DURATION to 0 SEC (For latching operation)
- 3) Set the RELAY SETPOINT to a value equal to your Maximum Daily Amount

## Alternatives For More Advanced Systems

It is also possible to:

- 1) Call out over a modem/public telephone system to a remote mode/serial printer and print at that location
- 2) Hold data in datalogger for later upload by a PC or Laptop
- 3) Have a remote PC with suitable remote metering software call in over a modem/public telephone system to poll the unit for information or to access its Datalogger contents

## Optional Items

A number of additional capabilities in the standard unit are there to assist you in customizing your solution including:

- 1) Field Enclosures
- 2) Power Options
- 3) Control Inputs
- 4) Temperature Sensing

