



# Surrey Water Balance Model Forum

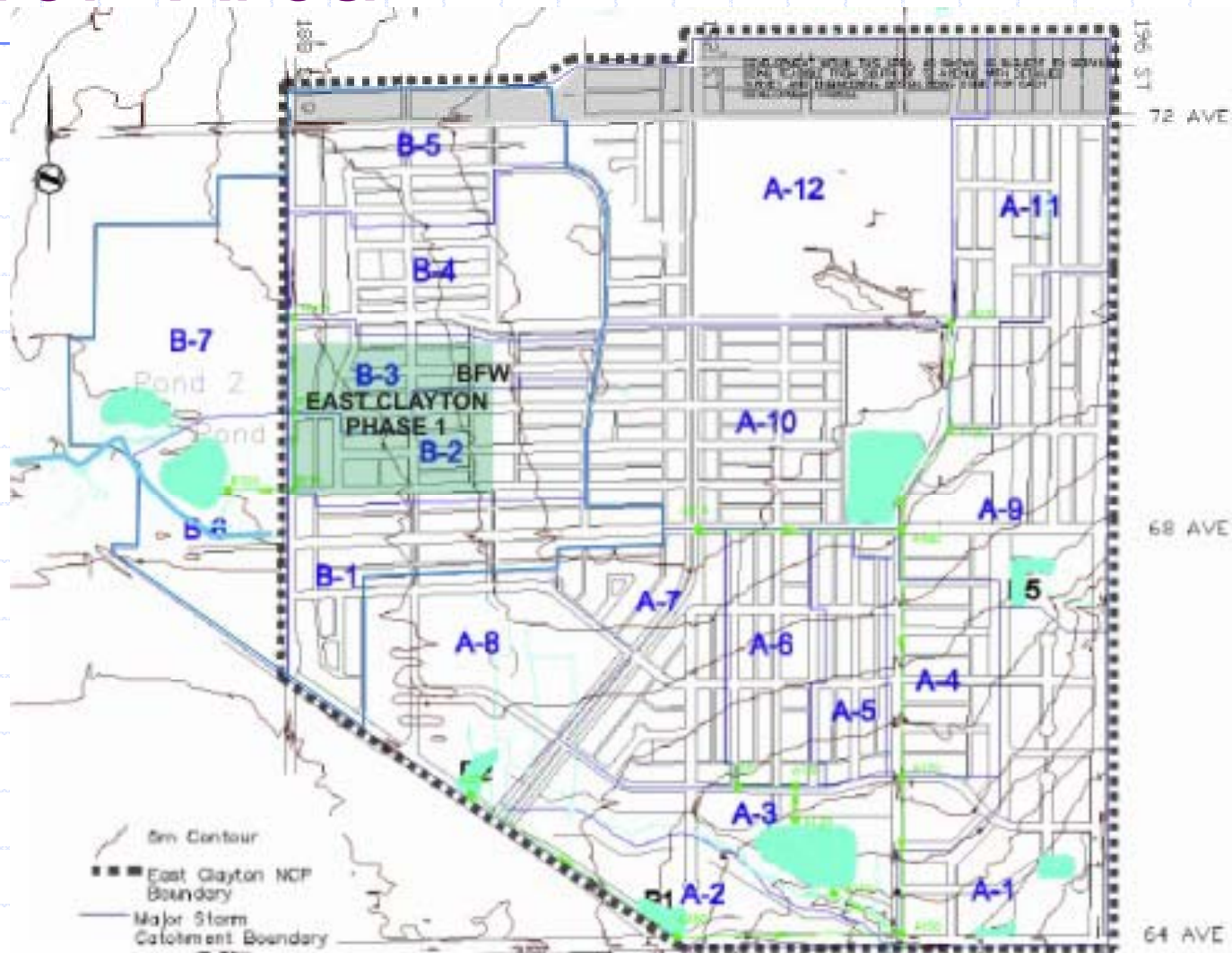
EAST CLAYTON UPDATE

March 12, 2008

# Program

- ◆ NCP Area
- ◆ Assumptions
- ◆ Proposed Systems
- ◆ Analysis and Results
- ◆ Lesson Learned

# NCP Area



Base Map Source: EAST CLAYTON NEIGHBOURHOOD CONCEPT PLAN (NCP)  
City of Surrey, 2000

# Review

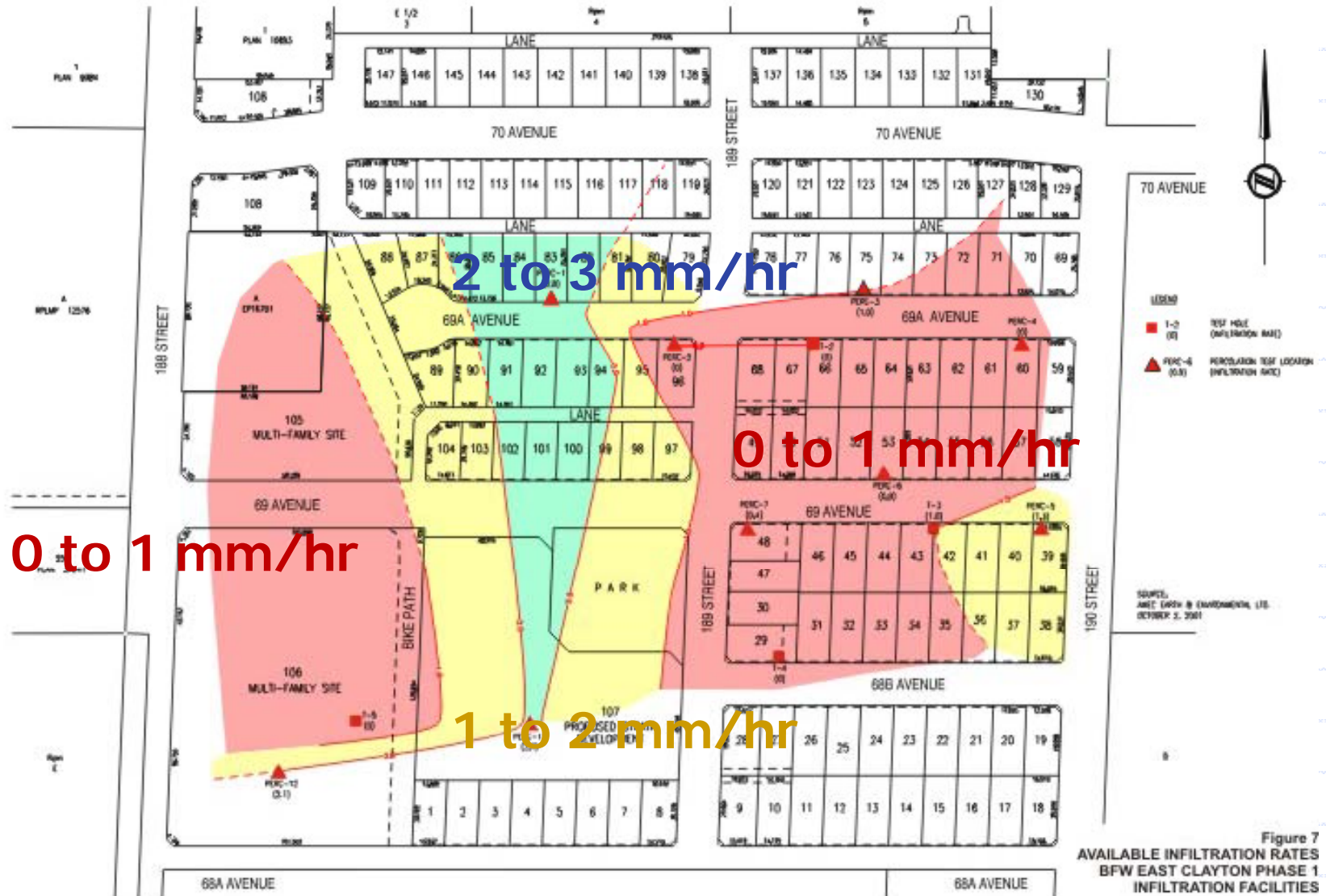
## ◆ NCP Assumptions

- Well drained with lots of top soil and infiltration
- 90% rain to be retained on site

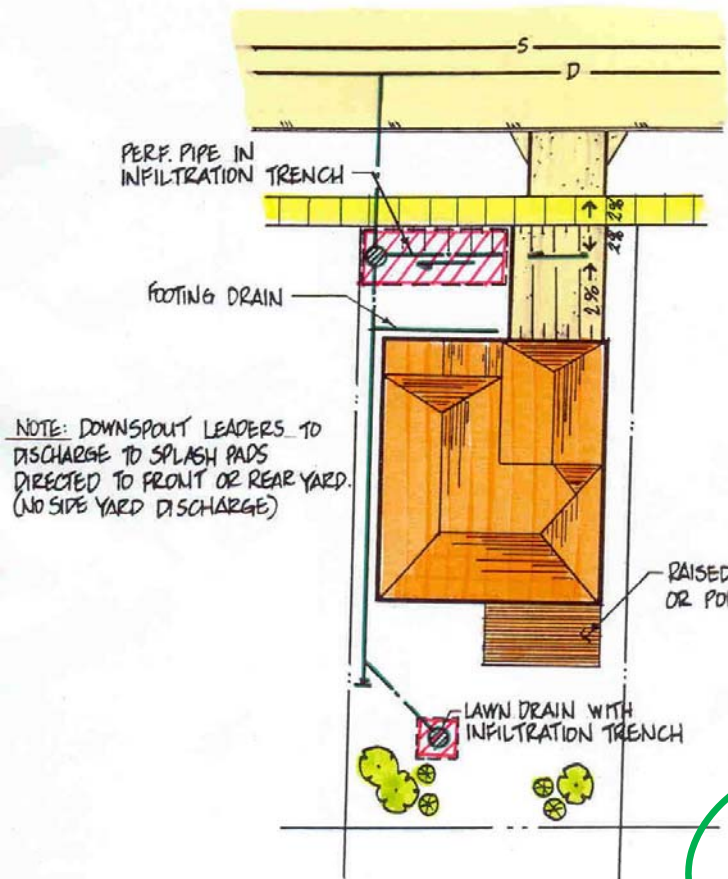
## ◆ Field conditions

- Not quite a match with expectations
- Regional Analysis yields  $>30\%$  runoff

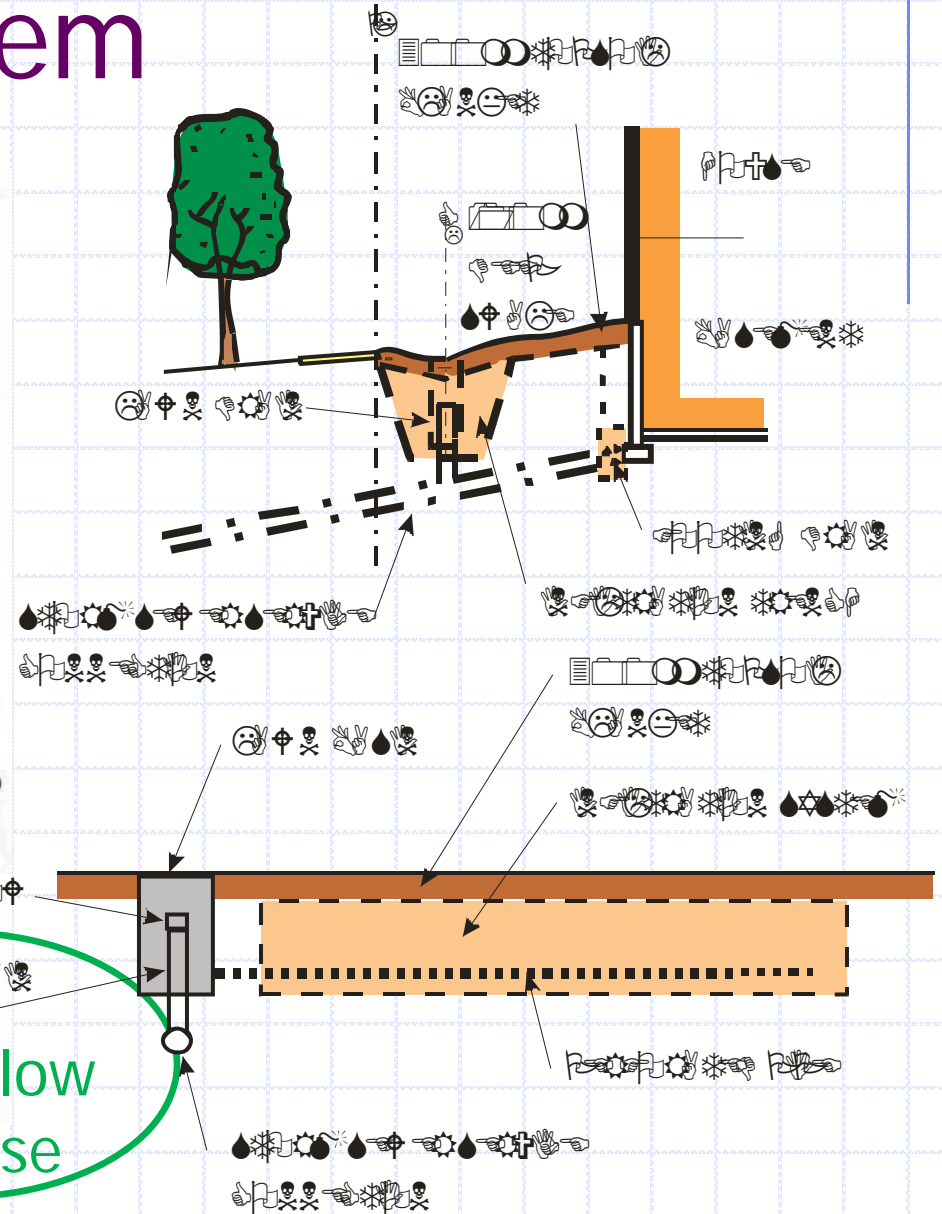
# Infiltration Testing



# Infiltration System



Base Flow Release

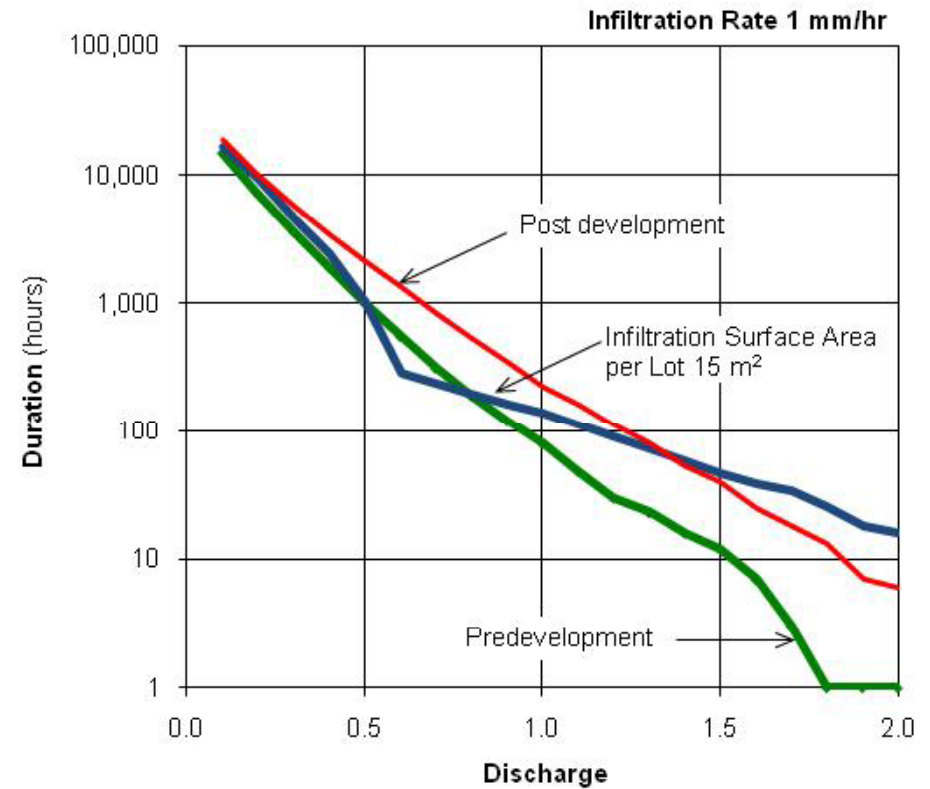


# Exceedance

## Baseflow Release

No

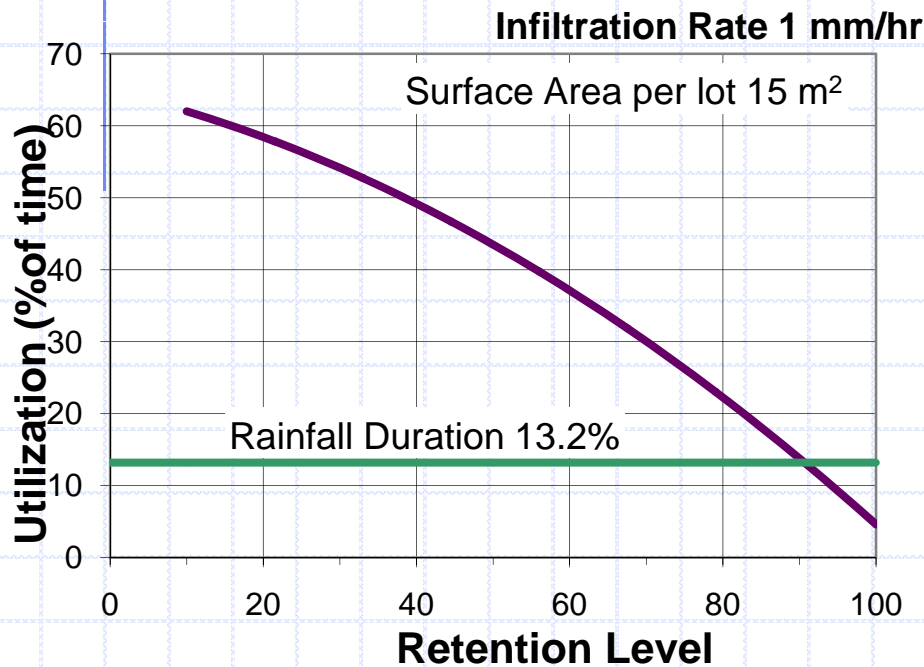
Yes, with 10mm hole



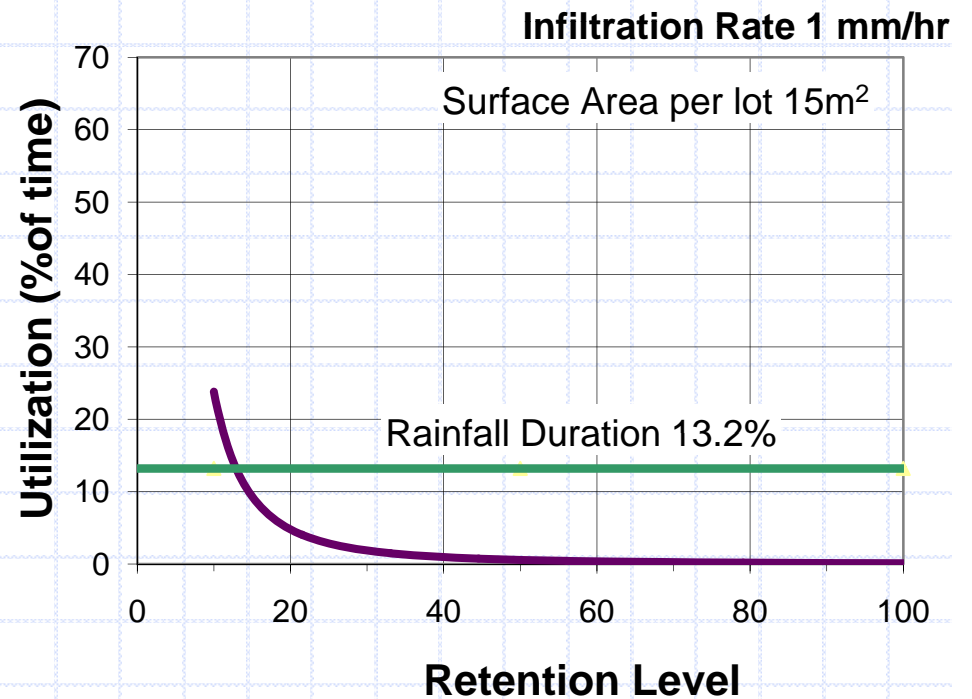
# System Utilization

## Baseflow Release

No

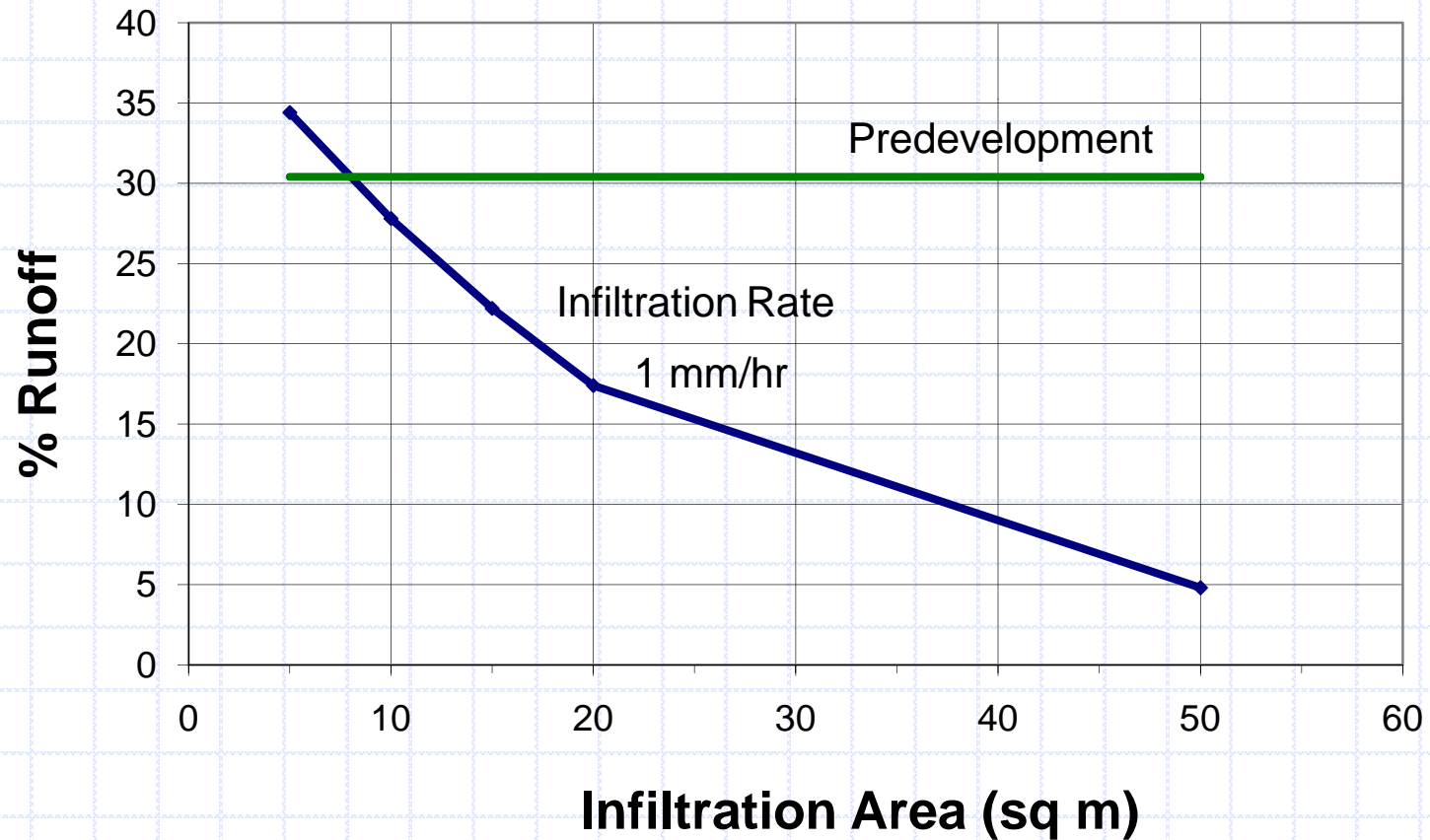


Yes, with 10mm hole



How deep and how long is water in the systems?

# Runoff Volume Reduction



# What is important

## ◆ Volume Reduction

- Small events reduced
- Base flows maintained

## ◆ Discharges not altered significantly

- Detention pond to control rates
- Small events reduced

## ◆ Base flow is important

- A 10 mm hole makes a big difference



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East Clayton Update

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