

# STORMWATER MANAGEMENT TOOLS FOR RESIDENTIAL DEVELOPMENT

## TOOL ③ RAINWATER TANKS WITHOUT INFILTRATION

If there isn't enough space for an infiltration system of any size, applicants can use rainwater tanks by themselves, with a slow-release outlet that connects to the City's storm sewer system. This allows the rainwater tank to temporarily hold stormwater during a rain event and then slowly release it into the City's storm sewer system.

The rainwater tank may be above-ground or below-ground depending on available space. The accompanying diagram shows a below-ground version.

Devices are available to filter the rainwater before it goes into your rainwater tank, and to keep your tank free from debris and mosquitoes. To capture a greater volume of water, several rainwater tanks can be linked together. The slow-release outlet allows the tank to slowly drain into the City's storm sewer system. This frees up space in the tank for the next rain event. In the summer you can keep the valve closed and use the captured rainwater for irrigation.



Example of below-ground rainwater tank: "Carat" tank by Graf



Example of above-ground rainwater tank: "HOG" tank

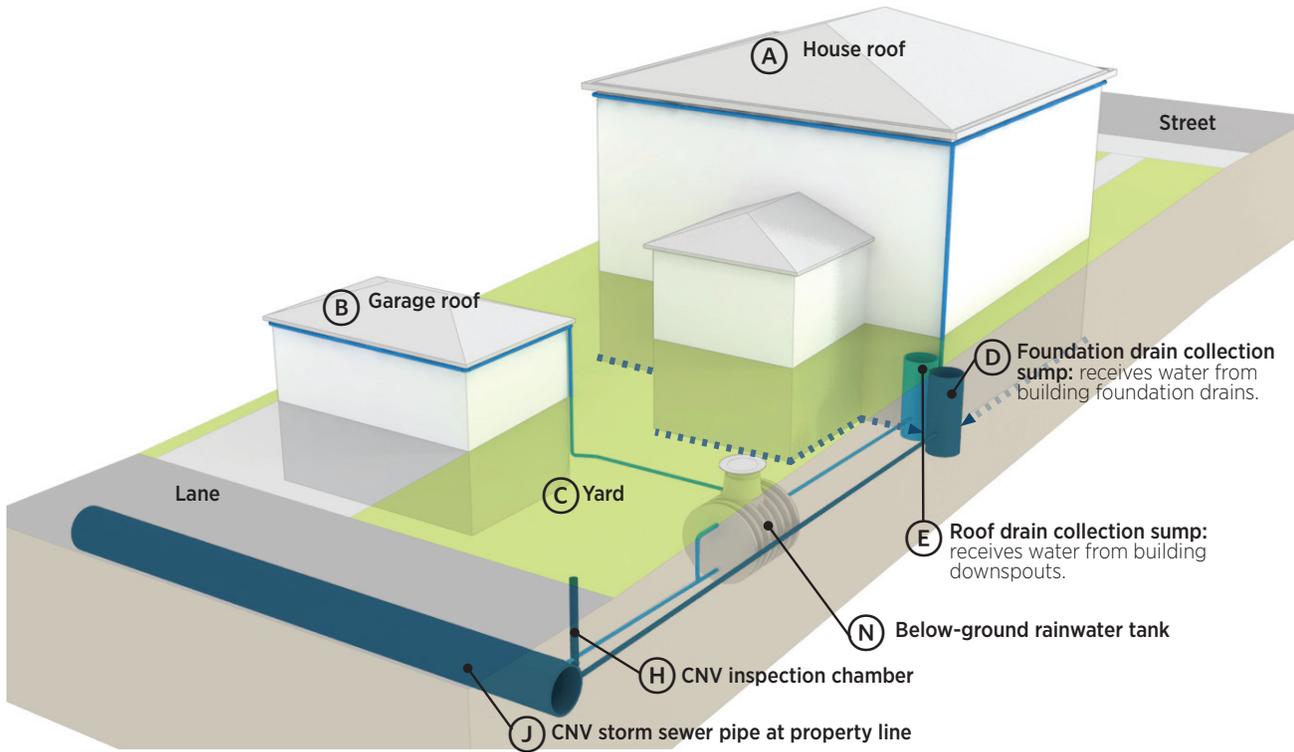
### WHERE CAN I GET THE PARTS I NEED?

- **Graf "Carat"** below-ground stormwater tank available from [BARR Plastics](#): 604-852-8522
- **"HOG"** above-ground stormwater tank available from [BARR Plastics](#): 604-852-8522

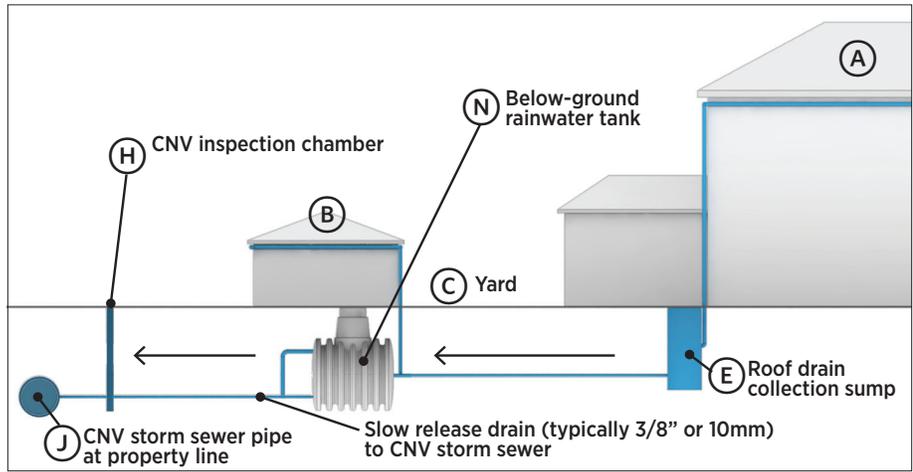
### WHERE DO THE TOOLS GO ON MY PROPERTY?

The illustrations on the following pages show different layouts for a below-ground rainwater tank on a typical residential lot. Two examples are given: one for a typical south-facing lot and one for a typical north-facing lot. In the north-facing lot the rainwater tank is shown in the backyard, as that will typically be the low point of the site. Likewise, in the south-facing lot the rainwater tank is shown in the front yard. The circled letters correspond to different parts of the accompanying worksheet.

# RAINWATER TANK (BELOW-GROUND) WITHOUT INFILTRATION ON A TYPICAL NORTH-FACING LOT



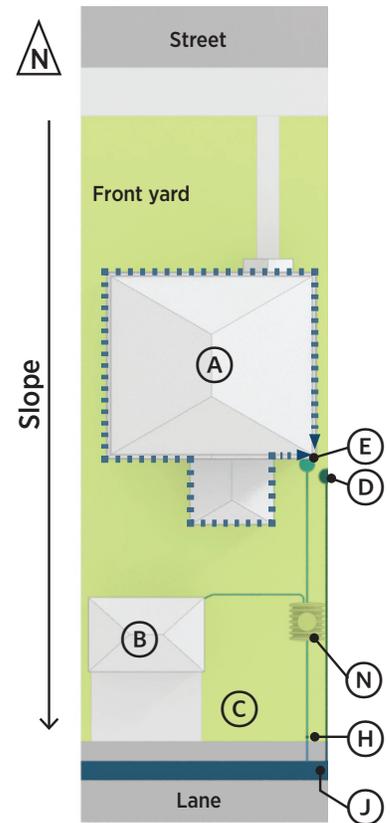
PERSPECTIVE VIEW



SECTION *Note: foundation drain sump connection to CNV storm sewer pipe not shown*

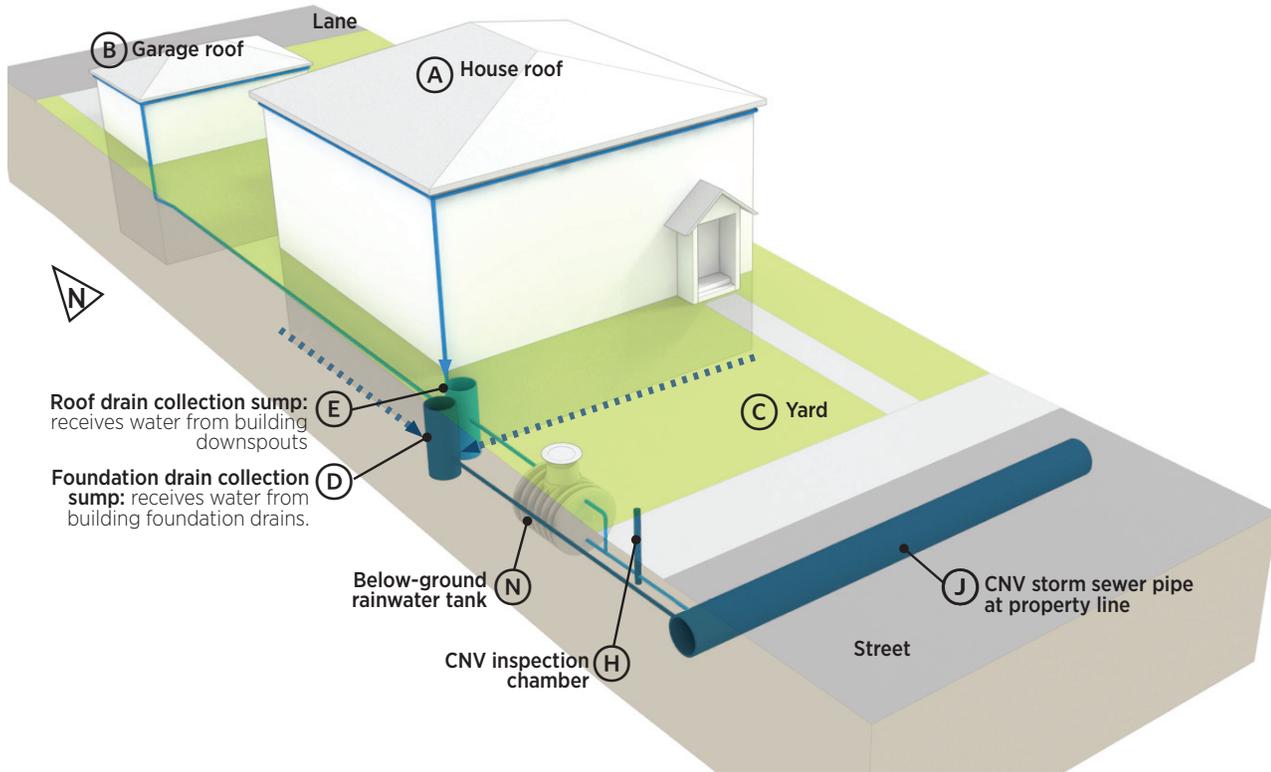
LEGEND:

- ..... **Perforated foundation drain pipe:**  
Drains water to foundation drain sump (D). Minimum 1% slope.
- **Solid foundation drain pipe:**  
Drains directly to CNV storm sewer (J). Minimum 1% slope.
- ..... **Perforated stormwater drain pipe:**  
Allows rainwater to infiltrate and soak into ground. Minimum 1% slope.
- **Solid stormwater drain pipe:**  
Minimum 1% slope.

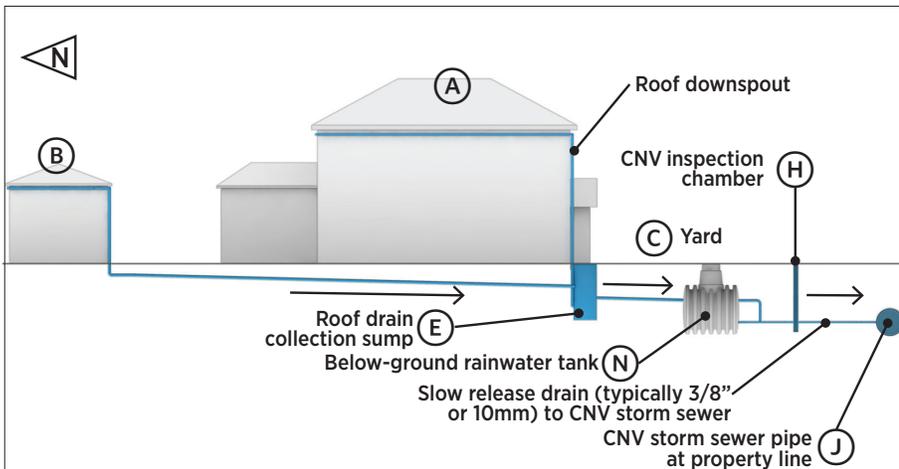


PLAN VIEW

# RAINWATER TANK (BELOW-GROUND) WITHOUT INFILTRATION ON A TYPICAL SOUTH-FACING LOT



## PERSPECTIVE VIEW

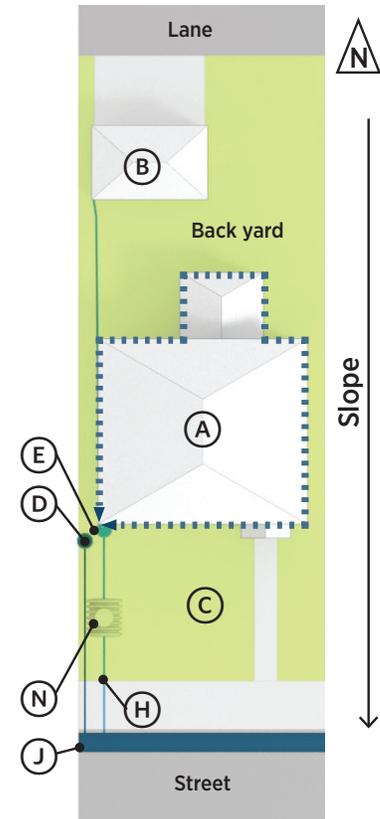


## SECTION

Note: foundation drain sump connection to CNV storm sewer pipe not shown

## LEGEND:

- ⋯⋯⋯ **Perforated foundation drain pipe:**  
Drains water to foundation drain sump (D). Minimum 1% slope.
- **Solid foundation drain pipe:**  
Drains directly to CNV storm sewer (J). Minimum 1% slope.
- ⋯⋯⋯ **Perforated stormwater drain pipe:**  
Allows rainwater to infiltrate and soak into ground. Minimum 1% slope.
- **Solid stormwater drain pipe:**  
Minimum 1% slope.



## PLAN VIEW

## **HOW BIG DOES MY RAINWATER TANK NEED TO BE?**

The minimum size of your rainwater tank should be **9,500 litres**, regardless of whether it is below-ground or above-ground. You can join multiple, smaller tanks together to achieve this volume.

## **HOW BIG DOES THE SLOW-RELEASE OUTLET NEED TO BE AND HOW DOES IT WORK?**

The slow-release outlet of the below-ground rainwater tank should be 9 mm (3/8”) in diameter to allow the water in your tank to slowly drain and therefore have room to hold the next rainfall event.

The slow-release outlet should be designed to drain to an attached **solid pipe** that directs water to the City of North Vancouver storm drain.