

The background of the slide is a light gray gradient, decorated with numerous realistic water droplets of various sizes. Some droplets are large and prominent, while others are small and subtle, scattered across the top, bottom, and sides of the frame. The main title is centered in the upper half of the image.

# **THE BOROUGH OF HIGHTSTOWN ENVIRONMENTAL COMMISSION**

STORM WATER MANAGEMENT DEMONSTRATION

AT

THE HIGHTSTOWN HOUSING AUTHORITY

# HURRICANE IRENE, THE AFTERMATH







# STORM WATER VICTORY IN HIGHTSTOWN

## Borough of Hightstown Adopts Storm water Management Ordinance to Protect Clean Water and Alleviate Future Flooding


In response to Hurricane Irene and its severe flooding aftermath in August 2011, the Hightstown Environmental Commission with assistance from the Stony Brook Millstone Watershed drafted and garnered public and official support for ground-breaking changes to its Storm water Management Ordinance. The changes are uniquely suited to highly urbanized areas with small lot sizes.

The State Model Ordinance does not address urbanized areas with very small lots. This ordinance creates a process for the Environmental Commission to review all zoning permit applications, including permits those for additions and alterations existing single-family residences.



# OPPORTUNITY


THE ENVIRONMENTAL COMMISSION PARTNERED WITH THE HOUSING AUTHORITY TO SUBMIT AN APPLICATION FOR A \$10,000 SUSTAINABLE JERSEY/PSE&G GRANT TO BUILD A DEMONSTRATION SITE TO SHOWCASE 3 SIMPLE STORM WATER SOLUTIONS THAT BUSINESSES AND HOMEOWNERS CAN USE TO HELP REDUCE THE RUNOFF FROM THEIR PROPERTY. THE PROJECT WAS SELECTED AND FUNDED IN THE FALL OF 2012.





# RAIN GARDENS

THE LARGEST AND MOST COMPLICATED PROJECT, THE RAIN GARDEN WAS CONCEIVED AND DESIGNED BY MEMBERS OF THE ENVIRONMENTAL COMMISSION TO HANDLE THE RUNOFF FROM ONE OF THE HOUSING AUTHORITY'S LARGEST BUILDINGS. THE GARDEN AND ASSOCIATED PIPING IS DESIGNED TO HANDLE 2 TIMES THE AVERAGE RAINFALL EVENT. IN THE COURSE OF AN AVERAGE YEAR IN NEW JERSEY, THIS RAIN GARDEN WILL RECHARGE OVER 169,000 GALLONS OF WATER BACK INTO THE SOIL, AND MORE IMPORTANTLY, KEEP IT FROM RUNNING DOWN THE STREET INTO OUR LAKES AND STREAMS.





# OUR COMPLETED RAIN GARDEN








# RAIN BARRELS

OUR RAIN BARREL PROJECT WAS DESIGNED TO TAKE THE WATER FROM A PORTION OF THE ROOF OF THE OFFICE BUILDING AND STORE IT TO BE USED FOR IRRIGATION. THE EXCESS RAINFALL IS RECHARGED BACK INTO THE SOIL THROUGH LATERAL LINES OF EZFLOW PIPING. THIS PROJECT IS ONE OF THE SIMPLEST PROJECTS FOR HOMEOWNERS.






# OUR COMPLETED RAIN BARRELS



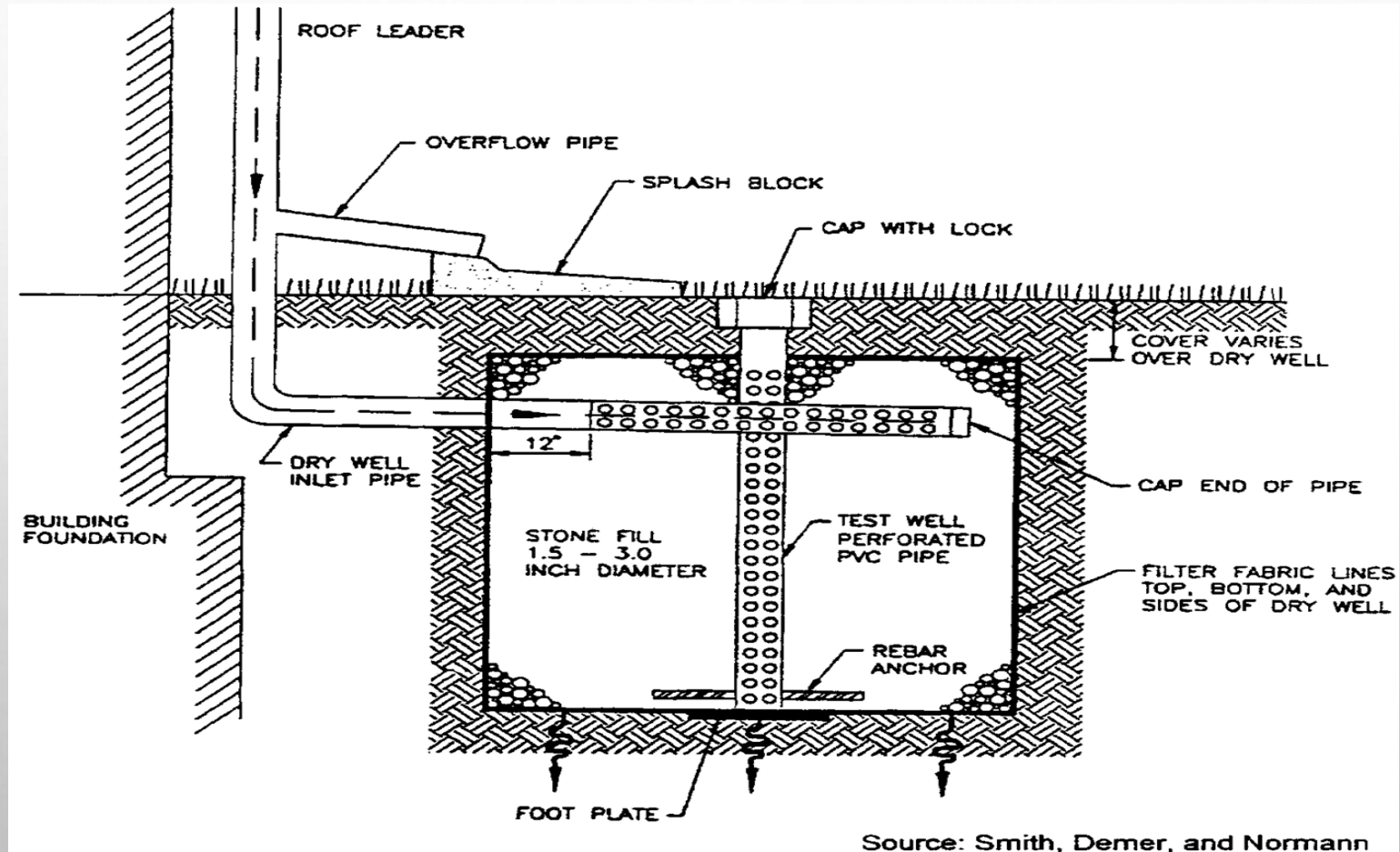


# DRYWELLS

ADDING DRYWELLS TO THE SITE IS AN IDEAL WAY OF RECHARGING STORM WATER DIRECTLY INTO THE SOIL IN AREAS WHERE OTHER SOLUTIONS ARE NOT PRACTICAL. DRYWELLS WORK THROUGH PERCOLATION, WHERE THE WATER FROM THE IMPERVIOUS SURFACE IS CHanneled TO THE DRYWELL AND ALLOWED TO NATURALLY PERCOLATE INTO THE SURROUNDING SOILS. OUR DESIGN INCORPORATED EZFOW PIPING WHICH INCREASES THE OVERALL SURFACE AREA FOR PERCOLATION.



# DRYWELL DRAWING






# DRYWELL INSTALLATION





# WHAT HAVE WE LEARNED?

- CONSTRUCTION OF SIMPLE STORM WATER MANAGEMENT SOLUTIONS CAN BE INCORPORATED INTO MOST NEW AND EXISTING HOMES AND BUSINESSES.
  - STORM WATER SOLUTIONS CAN BE HIDDEN OR QUITE ATTRACTIVE ADDITIONS TO YOUR LANDSCAPE.
  - MOST PROJECTS ARE FAIRLY SIMPLE AND CAN BE ACCOMPLISHED BY AN AVERAGE HOMEOWNER.
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# WHAT HAVE WE ACCOMPLISHED?

- THIS PROJECT REDUCES THE RUNOFF FROM THE HIGHTSTOWN HOUSING AUTHORITY SITE BY APPROXIMATELY 14%. THE AUTHORITY HAS ALREADY EXPANDED UPON THE PROJECT, ADDING DRAINAGE AND DRYWELLS IN TWO OTHER AREAS.
- 197,000 GALLONS OF WATER EACH YEAR WILL BE RECHARGED IN THE AQUIFER FROM THIS PROJECT INSTEAD OF RUNNING DOWN THE STREET INTO THE LAKE. JUST IN THE MONTH OF JUNE, 2013 WE HAVE COLLECTED OVER 40,740 GALLONS OF WATER. THAT IS THE EQUIVALENT OF FILLING 2 AVERAGE 20X40 FOOT IN GROUND POOLS. (OR FILLING THIS ROOM TO THE CEILING 1.5 TIMES)
- WE HAVE ADDED AN ATTRACTIVE LANDSCAPE FEATURE IN TOWN FOR ALL RESIDENTS TO ENJOY.





# SPECIAL THANKS

- THE SUSTAINABLE JERSEY/ PSEG SMALL GRANTS PROGRAM
  - THE BOARD OF COMMISSIONERS OF THE HIGHTSTOWN HOUSING AUTHORITY
  - STONY BROOK MILLSTONE WATERSHED
  - MEMBERS OF THE ENVIRONMENTAL COMMISSION WHO MADE THIS PROJECT A SUCCESS.
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