

5.0 HOUSE TO HOUSE SURVEYS

The house to house surveys were performed to investigate and identify potential inflow sources in the residential and commercial buildings in Catchment Areas 1, 3, and 4. These catchment areas were designated as priority inflow areas in the Phase 1 Part 1 CSO Control Plan report. House to house surveys were attempted in all buildings within each of the 3 priority sewer catchment areas, totaling 1,309 buildings, including 1,210 residential buildings and 91 commercial buildings. If the first attempt at entry was unsuccessful, two additional attempts were made to gain entry to the building. A total of 1,041 buildings were entered and inspected out of 1,309 buildings or 79.5%. The house to house surveys determined the following:

- Approximately 39.8% or 415 of the buildings inspected (1,041) had a sump pump.
- Approximately 38.7% or 507 of the total buildings (1,309) have rain leaders that enter the ground, 81.4% or 1,066 of the structures have rain leaders that discharge to the ground surface and approximately 3.4% or 44 with rain leaders entering the foundation.
- Similar to the rain leaders, drainage structures observed from public property were included on the inspection forms of buildings where access was not gained. Of the 1,309 total buildings, the following private drainage structures were observed:
 - 91 Flat Roof
 - 68 Yard Drains
 - 72 Driveway Drains
 - 22 Stair Drains
 - 41 Window Well Drains
- 55 connections to the sanitary sewer were confirmed by smoke testing.

Rehabilitation Recommendations

Based on the results of the house to house surveys, the three priority sewer catchments appear to contain a significant number of sources that contribute inflow to the sewer system, primarily sump pumps and rain leaders. These connections require correction or rehabilitation to prevent inflow from entering the sanitary system. All sources are on private property; therefore no rehabilitation costs have been included as it is assumed that the cost to rehabilitate private inflow sources will be borne by the property owner. The following actions are recommended to eliminate or reduce inflow into the sanitary sewer.

- Develop a disconnection policy to redirect flow from sump pumps to the City storm drains or to the ground surface. The disconnection policy should include procedures and a list of approved contractors for property owners to perform the disconnection.
- Develop a program to require private property owners to repair or replace leaking or damaged clean outs and open pipes to prevent inflow from entering the sanitary sewer system.
- Develop a program to require private property owners to disconnect roof drains and rain leaders from the sanitary sewer and redirect flow to the ground surface or into existing storm drain (if adequate capacity is available).
- Develop a program to require private property owners to disconnect yard, driveway, foundation and sidewalk drains from the sanitary sewer and redirect flow into the storm drain system (if capacity allows) or into infiltration sumps. Dye flooding can be performed to verify the connection of the yard or other drain to the sanitary sewer.

Conclusions

The City should prepare programs to coordinate disconnection of sump pumps and rain leaders. The City should also consider verifying the connection status of private drainage structures and prepare a program to coordinate disconnection of the private drainage structures from the sanitary sewer.

To date, the City has implemented a program to notify private property owners to disconnect sump pumps and rain leaders from the sewer system. Notifications requesting rain leader disconnections were sent to owners on November 15 and December 11, 2006. Notifications requesting sump pump disconnections were sent to owners on December 14, 2006. A sample of each notification letter is attached at the end of this section.

A detailed description of the house to house surveys including procedures, results, types of sources of inflow by priority catchment area, recommendations, and conclusions is presented in the following Technical Memorandum.

December 14, 2006

[REDACTED]

NEWPORT, RI 02840

RE [REDACTED]

Dear Homeowner,

The City recently completed testing of the sanitary sewers and house inspections as part of the City's Combined Sewer Overflow (CSO) Control Plan Project. The intent of the sewer testing and house inspections is to identify sources where rain water or groundwater is entering the sanitary sewer system. During and after rain events this additional flow can overwhelm the sanitary sewer system forcing the excess water and sewage in the system to be discharged into Newport Harbor at the Wellington Avenue CSO Facility or treated at the Wastewater Treatment Facility at an additional cost to the residents of the City. The City is required by the Rhode Island Department of Environmental Management to develop a CSO Control Plan that eliminates the CSO events at the Wellington Ave CSO Facility.

Sump pumps connected to the sanitary sewer system allow excess flow to enter the sewer system. The inspections completed by the City's Contractor indicates that the sump pump on your property is connected to the sanitary sewer. Section 13.08.030 (R) of the City ordinances prohibits connections such as sump pumps which direct rain runoff or groundwater to the sanitary sewer system unless approved by this office. At this time, the City is requesting your cooperation by disconnecting your sump pump discharge to the sanitary sewer system. Disconnection would entail redirecting your sump pump discharge to the outside away from the foundation and not towards a neighbor's property. Other options include directing the discharge to drywells or cistern/irrigation systems. We recognize there may be challenges in finding an alternative sump pump discharge for every location identified by the City's testing. The City may need to assist in providing an alternative in some situations after it is agreed that the property owner has exhausted all available options.

Please contact Kenneth R. Mason, Deputy Utilities Director- Engineering at 845-5614 if you have any questions concerning the disconnection of your sump pump and also to schedule an inspection to verify compliance with the City Ordinance.

Very truly yours,

Julia A. Forgue, PE
Director of Public Works

Cc: Kenneth R. Mason, PE, Deputy Utilities Director- Engineering

November 15, 2006

[REDACTED]

Newport, RI 02840

RE: Drain Disconnect Request

Dear Homeowner,

The City of Newport recently completed smoke testing of sections of the sanitary sewer system as part of the City's Combined Sewer Overflow (CSO) Control Plan Project. The intent of the smoke testing is to locate and identify sources where rain water is entering the sanitary sewer system. Roof gutters, and yard drains or driveway drains connected to the sanitary sewer system allow rain water to enter the sewer system. During rain events this additional flow can overwhelm the sanitary sewer system forcing the rain water and sewage in the system to be discharged to the Newport Harbor at the Wellington Ave. CSO Facility or treated at the Wastewater Treatment Facility at an additional cost to the residents of the City.

The smoke testing indicated that the roof drain on your property located at 1A & 1B Red Cross Ave. is connected to the sanitary sewer system. Section 13.08.030 (R) of the City ordinances prohibits connections of these drains to the sanitary sewer system unless approved by this office. At this time, the City is requesting your cooperation by disconnecting your drain system from the sanitary sewer system. Disconnection in this instance would entail having the downspout discharge above ground, away from the foundation, thus eliminating the direct discharge into the City's sanitary sewer system.

Please contact Kenneth R. Mason, Deputy Utilities Director-Engineering, if you have any questions concerning the above and also to schedule an inspection to verify compliance with the City's request. Mr. Mason can be reached at 845-5614.

Thank you for your anticipated cooperation with this request.

Sincerely,

Kenneth R. Mason PE
Deputy Utilities Director - Engineering

Cc: Julia A. Forgue, Director of Public Works

December 11, 2006

[REDACTED]

RE: [REDACTED]
Drain Disconnect - Second Request

Dear Homeowner,

This letter follows up on the attached November 15, 2002 letter to you regarding the results of the smoke testing of the sanitary sewer system in the area of your property. The testing indicated that the roof or yard drain system on your property is connected to the sanitary sewer system which is a violation of Section 13.08.030 (R) of the City ordinances. As of this date you have not contacted the City regarding this issue.

The City requests your cooperation in disconnecting the drain system in order to mitigate the Combined Sewer Overflows at the Wellington Avenue facility. It is important that you contact me as soon as possible, but no later than **December 18, 2006** so that an inspection can be scheduled to verify compliance with the City's request.

Disregard of this request will result in the violation being forwarded by this office to the City Solicitor's attention for further action. Your anticipated cooperation with the City's request to disconnect drains from the sanitary sewer system is appreciated. Please do not hesitate to contact me at 845-5614 should you have any questions.

Sincerely,

Kenneth R. Mason PE
Deputy Utilities Director - Engineering

Cc: Julia Forgue, Director of Public Works
Edward Lavallee, City Manager