



**Environmental Services, Inc.**

January 28, 2014

Mr. Vijay Gandhi  
New York State Department of Environmental Conservation  
Division of Water, Region 3  
21 South Putt Corners Road  
New Paltz, NY 12561-1620

**RE: VILLAGE OF MILLBROOK  
ANNUAL INFLOW AND INFILTRATION MANAGEMENT REPORT  
SPDES Permit No. NY-0025429**

Dear Mr. Gandhi:

I am pleased to report that the Village of Millbrook is continuing to make progress on improving their sanitary sewer collection system. To date 5,930 feet of sewer main has been lined with a Cured in Place system and 733 feet of sewer main has been replaced. The lining and replacement combined account for approximately 24% of the entire collection system. As of 2013 the Village has evaluated 92% of the collection system since 2007. This past year the Village has obtained funding to purchase their own video inspection equipment which should only increase the televising work.

During the past year the Village has focused their attention on their storm water drainage system. This system is in close proximity to the sanitary system in most parts of the Village and could potentially affect the sanitary system. Some of the work that has been done to that system includes repairs and televising of the piping as well as repairing of catch basins.

The following work was completed in 2013:

- Rehabilitated 5 manholes
- Internally sealed 14 manholes with Cementitious Coatings
- Televised 5,620 feet of sewer main
- Assessed the video to determine future improvement plan

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- Repaired damaged storm drain pipes to prevent street flooding and sanitary manhole submergence.
- Begin engineering analysis of Village wide storm system to develop sites for roof leader and sump pump discharges.

The scheduled list of work to be done in 2014 is as follows:

- Installation of inflow protector covers inside manholes
- Rehabilitation of additional manholes
- Internally lining at least 10 manholes
- Televising more storm water pipe and also sanitary sewer pipe
- Continue engineering analysis of Village storm water collection system

Since 2009 the Village has accomplished the following repairs/replacements to their sanitary sewer and storm water collection systems:

- 2009
  - Replaced 733 feet of clay tile sewer main with SDR 35 pipe
  - Rehabilitated 8 manholes in the collection system
  - Internally sealed 10 manholes
  - Replaced 1 catch basin in storm water collection system
  - Performed 3 days of camera inspection of sewer mains totaling 5,153 feet
  - Reviewed video of camera inspection and used to determine future improvements
  - Authorized code enforcement officer to perform sump pump inspections
- 2010
  - Lined 2,603 feet of sewer main
  - Rehabilitated 11 manholes
  - Televised 4,074 feet of sewer main as well as 2,603 feet of lined sewer main
  - Assessed video to determine future improvements
  - Repaired 3 catch basins in storm water collection system
  - Sent out a sump pump survey to residents and collected data
- 2011
  - Lined 2,562 feet of sewer main
  - Rehabilitated 10 manholes
  - Internally sealed 16 manholes
  - Televised 5,357 feet of sewer main plus 2,562 feet of lined sewer main
  - Assessed video to determine future improvements
  - Repaired 10 catch basins in storm water collection system

- 2012
  - Lined 765 feet of sewer main
  - Rehabilitated 11 manholes
  - Internally sealed 14 manholes
  - Televised 2,919 feet of sewer main
  - Assessed video to determine future improvements
  - Repaired 6 catch basins in storm water collection system
  
- Total including 2013
  - Lined 5,930 feet of sewer main with Cured-In-Place lining
  - Replaced 733 linear feet of sewer main
  - Rehabilitated 49 manholes in the collection system (30% of all manholes)
  - Internally sealed and grouted 55 manholes (34% of all manholes)
  - Repaired 28 catch basins and 2 broken storm water lines
  - While we have not able to remove any downspouts from the system, we were able to repair and cap two clean outs in the system. Downspout removal is going to necessitate significant re-routing and engineering to accomplish.
  - Sent out sump pump survey (January 2010)
  - Televised 25,978 feet of sewer main (this includes sections that were done more than once over the past 5 years)
  - Televised 1,784 feet of storm sewer pipe
  - Video has been reviewed and findings have been utilized to set the repair/replacement plan for the future.
  - Authorized Code Enforcement to perform Sump Pump inspections and issue citations to correct sump pump issues.

In addition to all the work that has been completed from 2009-2013 there was some other work done prior. This work was not performed by the Village because it is a private system that discharges to the Village collection system. The repairs to this system included the replacement of 150 feet of sewer lines and rehabilitation of 4 manholes.

Accompanying this report are the worksheets that are being utilized to manage our collection system. They include the work performed as well as those areas to be targeted for future remediation. Among these worksheets is one that contains a running list of all the areas within the system that have been evaluated. Within this worksheet you will see our list of defects which we have found during our inspections.

I have also included 2 graphs, the first showing the monthly average flows along with monthly precipitation from 2009 to the present. The second graph (Figure 1) shows the same data but also includes the trend over time for flow and precipitation. Over the past year the monthly average flow exceeded 200,000 GPD only twice. As you can see on the

second graph (Figure 1) the monthly flows have decreased significantly over the past several years indicating a reduction of I&I.

As shown by the improvements made to the collection system over the past several years, the Village of Millbrook is committed to improving their system and will continue to do so in the years to come. We will continue to do everything possible to reduce the amount of I&I entering the sanitary sewer collection system and maintain all aspects of the SPDES permit over time.

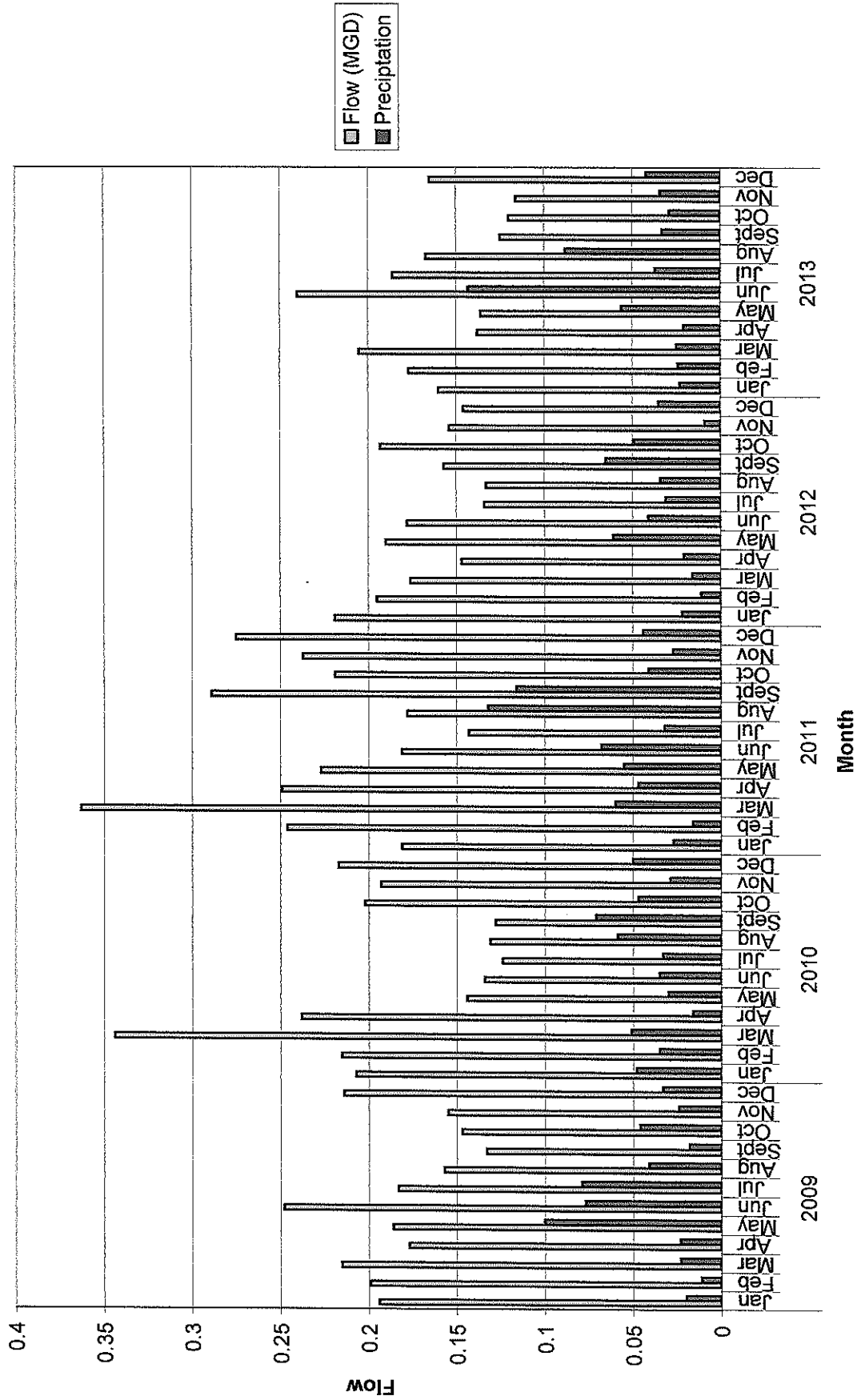
If you have any questions or concerns please feel free to call me any time.

Sincerely,

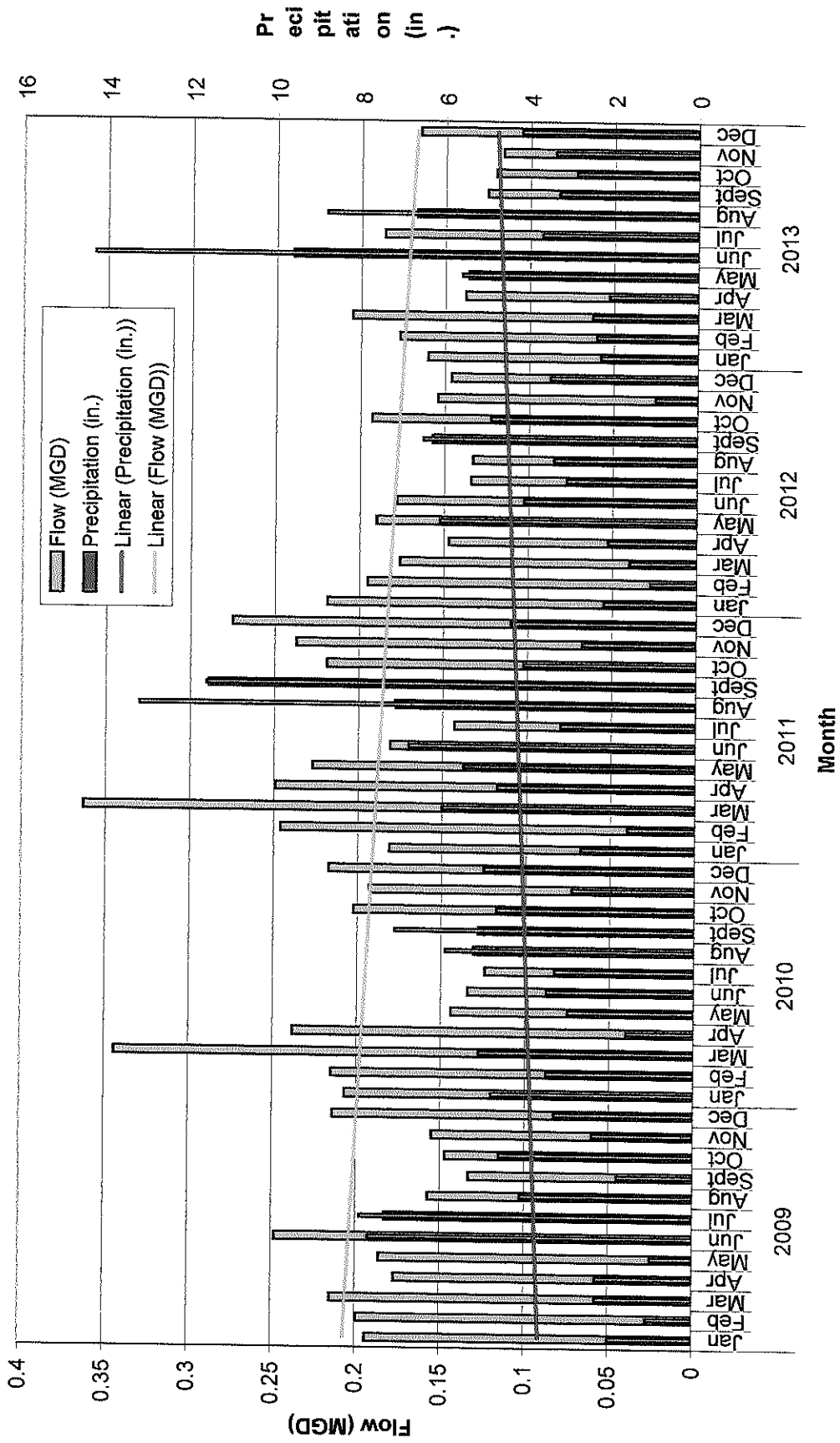


Scott E. Osborn  
Area Manager  
VRI Environmental Services

# Millbrook WWTP Flow



**Figure 1**  
**Monthly Average Flow and Precipitation VS. Time**



## Village of Millbrook Video Inspection of Sewer Mains

Year Completed	Work By	Street Name	Manhole Numbers (old numbers off old map)	Total Distance Covered	Pipe
2007	Fred Cook	Ciferri Drive	90A-91	242 ft	8 inch Clay
2007	Fred Cook	Reservoir Drive	69-68	276 ft	8 inch Clay
2007	Fred Cook	Pilgrim Lane	15-16, 16-17	446 ft (223,223)	8 inch Clay
2008	Fred Cook	Ciferri Drive	90-90A, 90-89 (partial/camera blocked)	319 ft (305,14)	8 inch Clay
2008	Fred Cook	Harts Village	58A-89 (partial/camera blocked)	144 ft	8 inch Clay
2008	Fred Cook	Maple Avenue	45-46, 46-47, 47-48 (partial), 48-49, 49-50, 50-51, 51-64	1134 ft (296.5,73,70,179.5,228,232.5,54.5)	8 inch Clay
2008	Fred Cook	Fountain Place	38-61, 61-62, 62-63	408 ft (125.5, 112, 170.5)	8 inch Clay
2008	Fred Cook	Haight Ave	86-66, 66-65, 86-87	658.5 ft (129.5,257.5,272)	8 inch Clay
2008	Fred Cook	Elm School Alley	45-44 (partial/camera blocked)	96 ft	8 inch Clay
2009	TV Ferrett	Anson	97-73A	643 ft (177, 297, 169.5)	8 inch Clay
2009	TV Ferrett	Maple	51-85	521 ft (126, 184, 211)	8 inch Clay
2009	TV Ferrett	Elm School Alley	35-45	540 ft (240, 300)	8 inch Clay
2009	TV Ferrett	Haight	64-65	164 ft	8 inch Clay
2009	TV Ferrett	Elm Drive	36-34	200 ft	8 inch Clay
2009	TV Ferrett	Elm Drive	35-78	1509 ft (300,150,125,150,150,125,275,140,94)	8 inch Clay
2009	TV Ferrett	Ciferri	90-89	95 ft	8 inch Clay
2009	TV Ferrett	Hillside	92-93	297 ft	8 inch Clay
2009	TV Ferrett	Harts Village	57A-52	975 ft (275, 175, 250, 100, 175)	8 inch Clay
2009	TV Ferrett	North Ave	52-1, 1-0	209 ft (125, 84)	8 inch, 12 inch Clay
2010	Lash	Harts Village	57A-52	975 ft (275, 175, 250, 100, 175)	8 inch Clay
2010	Lash	Ciferri	90-89	92	8 inch Clay
2010	Lash	Harts Village to Anson	58A-89	191	8 inch Clay
2010	Lash	Haight Ave	86-66, 66-65, 86-87	658.5 ft (129.5,257.5,272)	8 inch Clay
2010	Lash	North Ave	52-1, 1-0	209 ft (125, 84)	8 inch, 12 inch Clay
2010	Lash	Maple Avenue	48-47	152	8 inch Clay
2010	Lash	Reservoir Dr	68-67, 67-79	262 ft (251, 11)	8 inch Clay
2010	Lash/Atold	Church St	18-29D	1535 ft	8 inch AC, 10 inch clay

## Village of Millbrook Video Inspection of Sewer Mains

Year Completed	Work By	Street Name	Manhole Numbers (old numbers off old map)	Total Distance Covered	Pipe
2011	Fred Cook	Alden Place	2930, 30-31, 31-32, 32-32A, 32A-32B, 32B-32C, 32C-32D	709 ft (175, 175, 250, 2, 69, 162, 288)	8 inch Clay & AC
2011	Fred Cook	Fountain Place	38-61, 61-62, 62-63	408 ft (125.5, 112, 170.5)	8 inch Clay
2011	Fred Cook	North Ave	40-38A/39, 38A/39-38, 38-37, 37-0	848 ft (162, 341, 125, 220)	8 inch, 10 inch Clay
2011	Fred Cook	Reservoir	40/79A-67	145 ft	8 inch Clay
2011	Fred Cook	Between Reservoir & Frank	40/79A-23, 21-22, 22-23, 23-24, 24-25, 25-26, 26-26A	1288 ft (228, 109, 234, 231, 110, 110, 246)	8 inch Clay
2011	Fred Cook	Washington Ave	8-10	388 ft (138, 250)	8 inch Clay
2011	Fred Cook	Front St	8-7, 7-6, 6-5, 5-4, 4-3	1118 (336, 201, 188, 238, 155)	10 inch Clay
2011	Fred Cook	Franklin	7-19, 19-18	453 ft (225, 228)	10 inch Clay
2012	TAM	Valley Farm	110-110I (10 manholes total)	1851 ft (228, 151, 173, 201, 200, 226, 75, 294, 303)	8 inch AC
2012	TAM	Front St	2-1 (partial/camera blocked), 2-33, 2-3, 3-4, 4-5	934 ft (216, 239, 86, 155, 238)	10 inch, 12 inch Clay
2012	TAM	Front & Merritt	5-79	134 ft	8 inch Clay
2013	Aroid	Harts Village Rd	53-105 (14 manholes)	1909 ft	8 inch Clay
2013	Aroid	Rt 44	105-107	417 ft (273, 144)	8 inch AC
2013	Aroid	Pilgrim Lane	12-13, 13-14, 12-11, 11-6	750 (171, 161, 208, 210)	8 inch Clay
2013	Aroid	Church St	12-12A & 12-12B	176 (80, 96)	8 inch Clay
2013	Aroid	Dineen Rd	100-101, 101-102, 102-103, 100-PS	345 (41, 155, 120, 29)	8 inch AC
2013	Aroid	Maple Hill Drive		2023	8 inch PVC

## Problems Noted During Sewer Main Inspections

Year Completed	Work By	Street Name	Manhole Numbers (old numbers off old map)	Pipe	Problems Found During Inspection
2007	Fred Cook	Ciferri Drive	90A-91	8 inch Clay	Multiple cracks in pipe, offset joints, hole in pipe, break in connection defective, infiltration seeping, roots intruding
2007	Fred Cook	Reservoir Drive	69-68	8 inch Clay	Longitudinal crack, offset joint (slight)
2007	Fred Cook	Pilgrim Lane	15-16, 16-17	8 inch Clay	Multiple fractures
2008	Fred Cook	Ciferri Drive	90-90A, 90-89 (partial/camera blocked)	8 inch Clay	Multiple fractures, holes in pipe with soil visible, offset joints, roots intruding
2008	Fred Cook	Harts Village	58A-89 (partial/camera blocked)	8 inch Clay	Multiple fractures, holes in pipe with soil visible, offset joints, misaligned pipe
2008	Fred Cook	Maple Avenue	45-46, 46-47, 47-48 (partial), 48-49, 49-50, 50-51, 51-64	8 inch Clay	Multiple fractures, hole in pipe, sag in pipe
2008	Fred Cook	Fountain Place	38-61, 61-62, 62-63	8 inch Clay	Multiple fractures
2008	Fred Cook	Haight Ave	86-66, 66-65, 86-87	8 inch Clay	Multiple fractures, roots intruding, sag in pipe, offset joints
2008	Fred Cook	Elm School Alley	45-44 (partial/camera blocked)	8 inch Clay	Sag in pipe, roots intruding, major grease buildup
2009	TV Ferrett	Anson	97-73A	8 inch Clay	good condition, no major problems found
2009	TV Ferrett	Maple	51-85	8 inch Clay	
2009	TV Ferrett	Elm School Alley	35-45	8 inch Clay	Cracks, offset joints, roots intruding
2009	TV Ferrett	Haight	64-65	8 inch Clay	good condition, no major problems found
2009	TV Ferrett	Elm Drive	35-34	8 inch Clay	Cracks, offset joints, roots intruding
2009	TV Ferrett	Elm Drive	35-78	8 inch Clay	Infiltration runner, cracks, offset joints
2009	TV Ferrett	Ciferri	90-89	8 inch Clay	Multiple cracks, offset joints, broken pipe
2009	TV Ferrett	Hillside	92-93	8 inch Clay	good condition, no major problems found
2009	TV Ferrett	Harts Village	57A-52	8 in Clay	Roots intruding, broken pipe w/soil visible, cracks in pipe
2009	TV Ferrett	North Ave	52-1, 1-0	8 inch, 12 inch Clay	Roots intruding at numerous points

## Problems Noted During Sewer Main Inspections

Year Completed	Work By	Street Name	Manhole Numbers (old numbers off old map)	Pipe	Problems Found During Inspection
2010	Lash	Harts Village	57A-52	8 inch Clay	Roots intruding, broken pipe w/soil visible in 2 places, multiple cracks & fractures, Infiltration runners (4)
2010	Lash	Ciferri	90-89	8 inch Clay	Multiple cracks & fractures, offset joints, broken pipe
2010	Lash	Harts Village to Anson	58A-89	8 inch Clay	Multiple fractures, holes in pipe with soil visible, offset joints, misaligned pipe
2010	Lash	Haight Ave	86-66, 66-65, 86-87	8 inch Clay	Multiple fractures & cracks, roots intruding, sag in pipe, offset joints, infiltration staining
2010	Lash	North Ave	52-1, 1-0	8 inch, 12 inch Clay	Roots intruding at numerous points, Infiltration runners (2)
2010	Lash	Maple Avenue	48-47	8 inch Clay	Fractured pipe
2010	Lash	Reservoir Dr	68-67, 67-79	8 inch Clay	Infiltration stain, Multiple infiltration runners (6), broken pipe w/soil visible (2 places), multiple cracks
2010	Lash/Arold	Church St	18-29D	8 inch AC, 10 inch clay	Infiltration stain, broken pipe (3 places), multiple cracks, roots intruding, multiple fractures, sags
2011	Fred Cook	Alden Place	2930, 30-31, 31-32, 32-32A, 32A-32B, 32B-32C, 32C-32D	8 inch Clay & AC	Debris in pipe, sags in multiple places, infiltration at 2 places, roots, broken pipe
2011	Fred Cook	Fountain Place	38-61, 61-62, 62-63	8 inch Clay	Entire length of pipe is lined, all ok
2011	Fred Cook	North Ave	40-38A/39, 38A/39-38, 38-37, 37-0	8 inch, 10 inch Clay	Roots @ numerous points, sag, hole in pipe that is leaking, crack that is leaking, heavy gravel deposits
2011	Fred Cook	Reservoir	40/79A-67	8 inch Clay	Offset joints, sags
2011	Fred Cook	Between Reservoir & Franklin	40/79A-23, 21-22, 22-23, 23-24, 24-25, 25-26, 26-26A	8 inch Clay	Offset joints, Infiltration runners (18), roots in numerous places.
2011	Fred Cook	Washington Ave	8-10	8 inch Clay	Fair condition, no major problems found
2011	Fred Cook	Front St	8-7, 7-6, 6-5, 5-4, 4-3	10 inch Clay	Multiple sags, debris, offset joint.
2011	Fred Cook	Franklin	7-19, 19-18	10 inch Clay	Roots @ numerous points, sag
2012	TAM	Valley Farm	110-110I (10 manholes total)	8 inch AC	Multiple offset joints, few minor cracks, sags, debris
2012	TAM	Front St	2-1 (partial/camera blocked), 2-33, 2-3, 3-4, 4-5	10 inch, 12 inch Clay	Roots, offset joints (minor), inflow from 2 laterals
2012	TAM	Front & Merritt	5-79	8 inch Clay	Good condition

## Problems Noted During Sewer Main Inspections

Year Completed	Work By	Street Name	Manhole Numbers (old numbers off old map)	Pipe	Problems Found During Inspection
2013	Aroid	Harts Village Rd	53-105 (14 manholes)	8 inch Clay	Hole in pipe (2), fracture - all in 104A-105; broken pipe in 59-60, 53-59 has been lined, 60-104 ok
2013	Aroid	Rt 44	105-107	8 inch AC	Sag, posts intruding (5) in 105-106,
2013	Aroid	Pilgrim Lane	12-13, 13-14, 12-11, 11-6	8 inch Clay	Infiltration stains, offset joints (3), cracks, infiltration runner, roots
2013	Aroid	Church St	12-12A & 12-12B	8 inch Clay	offset joints (4)
2013	Aroid	Dineen Rd	100-101, 101-102, 102-103, 100-PS	8 inch AC	sag in 101-102
2013	Aroid	Maple Hill Drive		8 inch PVC	offset joint, sag

### Manhole Lining / Manhole Rehab / Lining & Rehab

Road	Manhole #	Depth below grade	Lid size (in)	Manhole Type	Work Done	Date Completed
Church St	21	flush	26	Brick	grouting	12/2/2009
Church St	27	1.5 inches	26	Brick	riser and lid, grouting	10/19/09 & 12/2/09
Church St	28	flush	26	Brick	grouting	12/2/2009
Church St	29	1 inch	26	Brick	grouting	12/2/2009
Elm School	44	4 inches	26	Brick	riser and lid	10/15/2009
Elm School	46	14 inches	26	Brick	precast risers and lid	9/30/2009
Haight Ave	64	7 inches	26	Brick	precast risers and lid	9/30/2009
Haight Ave	65	above grade	26	Brick	new lid	9/11/2009
Haight Ave	66	1" one side, flush other	26	Brick	grouting	12/2/2009
Hillside Ave	93	above grade	24	Concrete	grouting	12/2/2009
Hillside Ave	92	2.5 inches	24	Concrete	concrete rings and new riser	9/21/2009
Ciferri Dr	90	1.5 inches	24	Concrete	riser	9/21/2009
Ciferri Dr	90A	1 inch	24	Concrete	riser	9/21/2009
Ciferri Dr	91	0.5 inches	24	Concrete	riser	9/21/2009
Anson Ave	95	above grade	20	Brick	grouting	12/2/2009
Harts Village	52	1 inch	26	Brick	grouting	12/1/2009
North Ave	1	2 inches	26	Brick	riser and lid, grouting	10/19/09 & 12/1/09
North Ave	38	1 inch	26	Brick	removed steel ring, new riser and lid, grouting	12/3/2009
Dineen	100	0.5 inches	24	Concrete	riser	3/2/2010
Maple	49	2.5 inches	26	Brick	riser and lid	3/17/2010
Between Res & Alden	80	1 inch	26	Brick	riser and lid	3/12/2010
Between Res & Alden	81	at grade	26	Brick	riser and lid	3/12/2010
Between Res & Alden	82	1.5 inches	26	Concrete	grouting and riser	5/1/2010
Harts Village Rd	104	1 inch	24	Concrete	precast conc. risers	7/8/2010
Route 44	107	1.5 inches	24	Concrete	riser	7/22/2010
Anson	89	12 inches	24	Concrete	precast conc risers, frame and lid (26", was 24")	9/29/2010
Pilgrim	14	30 inches	26	Brick	precast conc risers, frame and lid	9/29/2010
Church	29A	1 inch	26	Brick	removed old steel riser and installed new riser	10/14/2010
Between Res & Frank	23	2 feet	26	Brick	precast conc risers (4) and new frame and lid	10/29/2010

## Manhole Lining / Manhole Rehab / Lining & Rehab

Road	Manhole #	Depth below grade	Lid size (in)	Manhole Type	Work Done	Date Completed
Elm Dr	77	2 inches	26	Brick	removed damaged steel ring/installed new riser & lid	3/17/2011
Harts Village Rd	54	at grade	26	Brick	grouting/cement lining	6/9/2011
Harts Village Rd	58	0.5 inches	26	Brick	grouting/cement lining	6/9/2011
Harts Village Rd	58A	at grade	24	Brick	grouting/cement lining	6/9/2011
Harts Village Rd	59	1 inch	26	Brick	grouting/cement lining	6/9/2011
Haight Ave	86	0.5 inches	20	Brick	grouting/cement lining	6/10/2011
Haight Ave	87	1 inch	20	Brick	grouting/cement lining	6/10/2011
Fountain Place	61	above grade	26	Brick	grouting/cement lining	6/9/2011
Fountain Place	62	above grade	26	Brick	grouting/cement lining	6/9/2011
Fountain Place	63	flush	70	Brick	grouting/cement lining	6/9/2011
Reservoir Dr	79	1.5 inches	26	Brick	grouting/cement lining	6/9/2011
Reservoir Dr	67	.5 inches	26	Brick	grouting/cement lining	6/10/2011
Between Res & Aiden	80	1 inch	26	Brick	grouting/cement lining	6/10/2011
Between Res & Aiden	81	at grade	26	Brick	grouting/cement lining	6/10/2011
Elm Dr	35	1.5 inches on one side	26	Brick	grouting/cement lining	6/10/2011
Elm School Alley	44	4 inches	26	Brick	grouting/cement lining	6/13/2011
Elm School Alley	45	1 inch	26	Brick	grouting/cement lining	6/13/2011
North Ave	37	9 inches	26	Brick	precast concrete riser and new manhole frame and lid	6/16/2011
Between Res & Frank	24	3 inches	26	Brick	Installed new risers and lid	6/27/2011
Reservoir Dr	40/79A	8 inches		Brick	precast concrete riser and new manhole frame and lid	8/11/2011
Reservoir Dr	70	2 inches	26	Brick	Installed new risers and lid	11/2/2011
Rt 44	106	3.5 inches	24	Concrete	Installed 2 new cast iron risers	10/3/2011
Haight Ave	66	1" one side, flush other	26	Brick	Installed new risers and lid	11/2/2011
Dineen	103	at grade	24	Concrete	Installed new riser	11/2/2011
Elm Dr	76	2 inches	26	Brick	Removed damaged steel ring/installed new riser & lid	12/28/2011
Between Res & Frank	22	1.5 inches	26	Brick	Installed new riser and lid	12/29/2011

### Manhole Lining / Manhole Rehab / Lining & Rehab

Road	Manhole #	Depth below grade	Lid size (in)	Manhole Type	Work Done	Date Completed
Valley Farm	110	flush	24	Concrete	Grouting/cement lining & precast concrete risers and new manhole frame w/lid	6/18/2012
Valley Farm	110A	under pavement	24	Concrete	Grouting/ cement lining & new precast concrete risers	6/18/2012
Valley Farm	110B	.5 inches	24	Concrete	Grouting/ cement lining & new precast concrete risers	6/18/2012
Valley Farm	110C	.5 inches	24	Concrete	Grouting/ cement lining & new precast concrete risers	6/18/2012
Valley Farm	110D	at grade	24	Concrete	Grouting/ cement lining & new precast concrete risers	6/18/2012
Valley Farm	110E	at grade	24	Concrete	Grouting/ cement lining & new precast concrete risers	6/18/2012
Valley Farm	110F	at grade	24	Concrete	Grouting/ cement lining & new precast concrete risers	6/18/2012
Valley Farm	110G	under pavement	24	Concrete	Grouting/cement lining & precast concrete risers and new manhole frame w/lid	6/18/2012
Valley Farm	110H	.5 inches	24	Concrete	Grouting/ cement lining & new precast concrete risers	6/18/2012
Valley Farm	110I	at grade	24	Concrete	Grouting/cement lining & precast concrete risers and new manhole frame w/lid	6/18/2012
Church St	29B	1 inch	26	Concrete	Grouting/cement lining & poured new cement bottom, precast concrete risers and manhole	6/18/2012
Reservoir Drive	40/79A	8 inches		Brick	Grouting/cement lining	6/18/2012
Between Res & Frank	23	2 feet	26	Brick	Grouting/cement lining	6/18/2012
Between Res & Frank	22	1.5 inches	26	Brick	Grouting/cement lining	6/18/2012







# Millbrook Sewer Manhole Work Targeted

Road	Manhole #	Distance below grade	Depth (in)	Lid size (in)	Manhole Type	Work needed	Comments
Church St Maple Ave & Velleit Way	29 D	2.25 inches	69	24	Concrete	riser	Bricks wet, steel rings need to be replaced (10 inches below grade)
	26	at grade	71	26	Brick	risers, lid, and grouting	
	25	3 inches		26	Brick	risers, lid, and grouting	
Elm Drive	36	1.5 inches on one side		26	Brick	riser and lid	under pavement could not remove lid
	71	2 inches on one side		26	Brick	riser and lid	could not open
	73	under pavement	??	??		dig up and check	
	73A	under pavement	??	20		Frame and lid	Lid stuck, change to 24" frame and lid
	74		??		Brick	replace frame and lid	could not open
	78	under pavement	??	??		dig up and check	
between Elm & Fint	33	2" above	54.5	26	Brick	grouting	Behind #17 Elm
Haight Ave	86	0.5 inches	108	20	Brick	riser and lid, grouting	ring and lid damaged, replace with 24 inch frame is 16' below grade
	87	1 inch	62	20	Brick	riser and lid, grouting	Ring missing, need new frame and lid
Maple Ave	83	2 inches	??	20 or 24		riser and lid	under pavement could not remove lid
	84	1 inch	66	20		riser and lid	ring badly damaged, 6" grind to frame
	85	above grade	??	20		replace frame and lid	could not open
North Ave	0	1 inch	63	26	Brick	riser and lid, grouting	ring broken, good condition but wet
Pilgrim Ln	13	1 inch	83.5	26	Brick	riser and lid	
Dineen	102	above grade	88.5	24	Concrete	new ring and regrade	Steel riser ring is corroding away and lid just sits on top
	101	at grade	76	26	Concrete	new ring and regrade	Steel riser ring is corroding away and lid just sits on top
Halcyon Rd	112	under pavement		24	Concrete	Locate and expose	

High Priority

## Sewer Main Work Targeted

Road	Manhole #'s	Distance (Feet)	Pipe Size	Type of Work	Projected Completion	Reason for repairs
Reservoir to Franklin	40/79A-23	228	8"	pipe lining	2015	Section of pipe is cast iron and has pitting, Infiltration runners
Alley btwn Res to Franklin	21-25	684	8"	pipe lining	2015	Infiltration and roots
Harts Village Rt 44 (Sharon Tpk)	59-60, 104A-105 105-106	491	8"	pipe lining	2015	Holes in pipe Holes in pipe, guardrail posts intruding through pipe
		273	8"	pipe lining	2015	

## Millbrook Sewer Main Camera Work to be Done

Road	Manholes	Distance	Year
Halcyon Rd	111-113	1,056	2014
Carol Blvd		1025	2014
Linden Ln		500	2014
Maple Hill		unknown	2014
Millbrook Hollow	70A-70E	unknown	2014
Pilgrim Lane	15-17	445	2014
Reservoir Dr	67-70	649	2014