

US EPA ARCHIVE DOCUMENT

City of Portsmouth US EPA/Ohio EPA Joint Presentation

*Administrative Order on Consent
Public Meeting*

February 12, 2013



History (1)

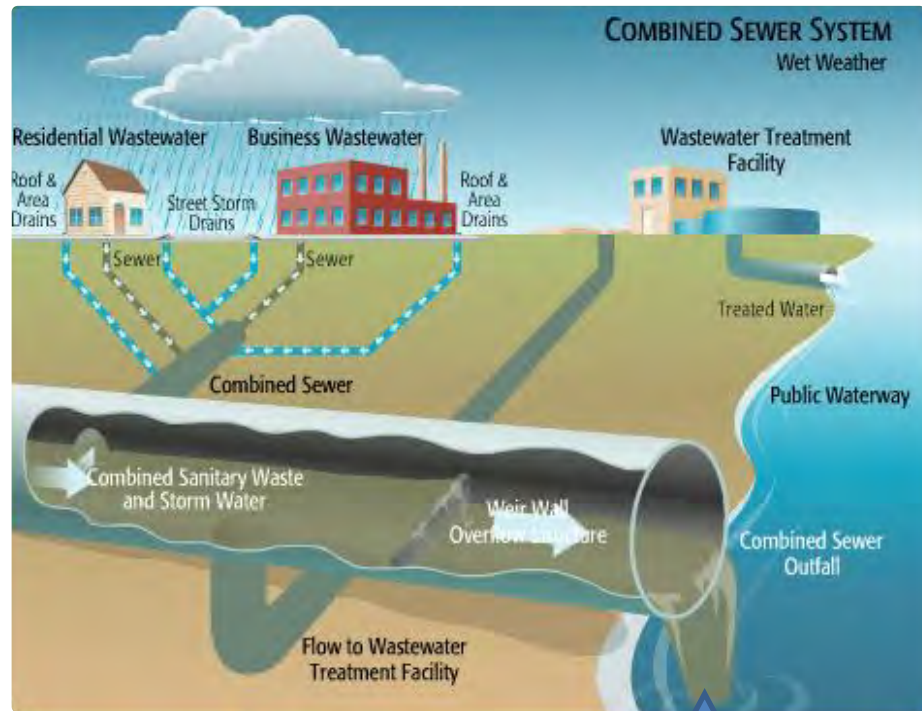
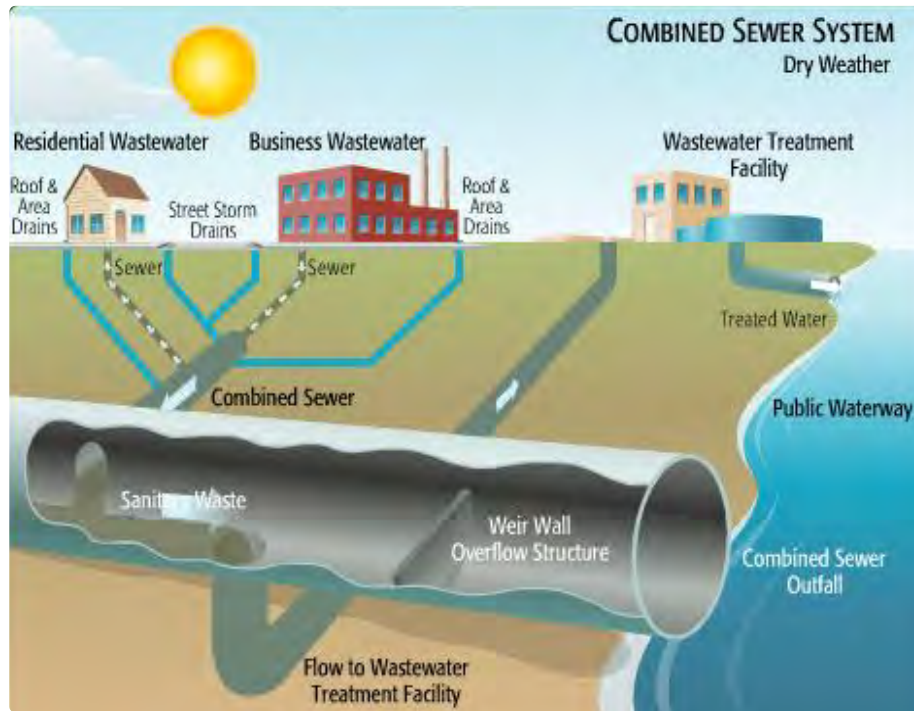
Long Term Control Plan (LTCP) and Administrative Order on Consent (AOC)

March 2004: City required to submit a Long Term Control Plan (LTCP) to Ohio EPA by September 2006.

W.E. Stilson Consulting Group of Columbus hired due to past history with Portsmouth
Sept. 2006: Stilson Plan submitted



What is a Long Term Control Plan (LTCP)?



www.sd1.org

Control of Combined Sewer Overflows (CSOs)



Where are CSOs?



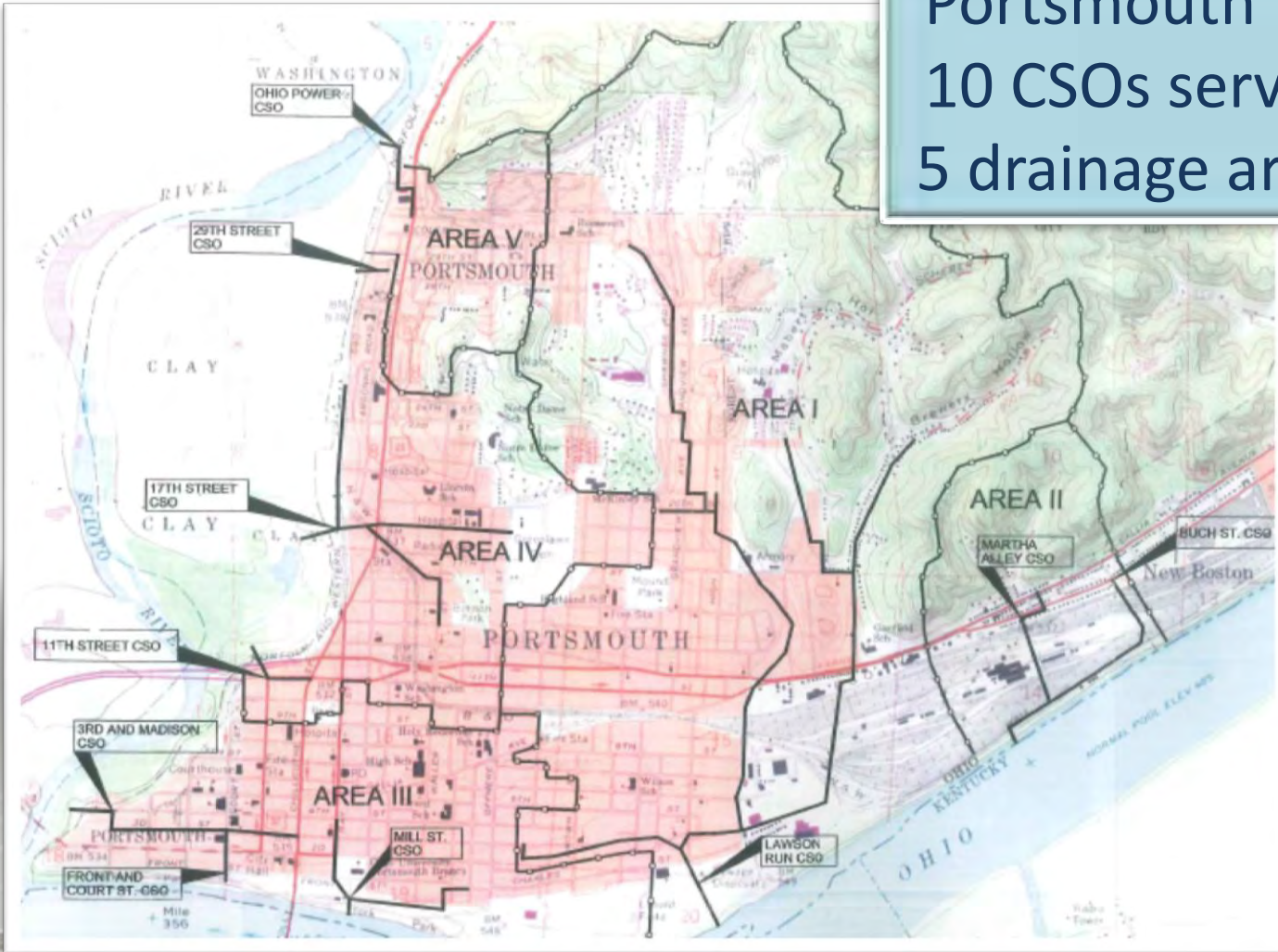
Combined sewer systems serve roughly **772** communities.

Ohio has approximately 1,233 permitted CSOs in **81** communities.



Portsmouth CSO Locations

Portsmouth has
10 CSOs serving
5 drainage areas



History (2)

Long Term Control Plan (LTCP) and Administrative Order on Consent (AOC)

Sept. 2006: Stilson LTCP is submitted to Ohio EPA.

Portsmouth's cost to comply: **\$39.9 million!**

However, the report stated that costs in excess **\$15 million** would be a "High Burden" for Portsmouth.

Due to workload in Ohio, USEPA (Chicago) took the lead in reviewing many of Ohio's LTCPs, including Portsmouth's.

Sept. 2006 - July 2008: USEPA reviewed Stilson LTCP.



History (3)

Long Term Control Plan (LTCP) and Administrative Order on Consent (AOC)

August 2008: USEPA directed City to revise its LTCP.

Due to personnel changes at W.E. Stilson, City decided to select a new consultant to revise the LTCP as directed by USEPA.

2008: Strand Associates chosen due to extensive experience in negotiating LTCPs with EPA for other communities (Cincinnati, Louisville, Northern Kentucky, etc.)



History (4)

Long Term Control Plan (LTCP) and Administrative Order on Consent (AOC)

July 2009: Strand Associates revised LTCP submitted to USEPA

Focused heavily on **'affordability'** and the City's **'financial capability.'**

- Less than 2% of MHI (median household income)
- Less than \$20 million

Also "24/7" needs of system: maintenance/upkeep



History (5)

Long Term Control Plan (LTCP) and Administrative Order on Consent (AOC)

July 2009: Strand LTCP recommended:

1st PRIORITY: Critical Infrastructure Needs

General Treatment Plant Upgrades

North Moreland Sewer Rehabilitation

Grandview Avenue Improvements

2nd PRIORITY: Combined Sewer Overflows

Expand plant capacity from 10 MGD to 22.5 MGD for wet weather treatment. (\$13 million)



History (6)

Long Term Control Plan (LTCP) and Administrative Order on Consent (AOC)

July –Dec. 2009: USEPA review of revised LTCP.

January 2010: USEPA issues a “Section 308 Request” for more information regarding the revised plan.

Mayor Murray selects Environmental Engineering Service of Lebanon, Ohio to prepare a new LTCP in response to “308 Request.”

October 2010: New LTCP submitted to USEPA:
\$70 million to be completed in 14 years.



History (7)

Long Term Control Plan (LTCP) and Administrative Order on Consent (AOC)

April 2011: City officials requested a meeting with USEPA to review the affordability and financial burden of the LTCP submitted by Mayor Murray.

Late 2011: USEPA agreed to set aside the Murray LTCP and re-open discussions with the City.



History (8)

Long Term Control Plan (LTCP) and Administrative Order on Consent (AOC)

March 2012: Kickoff meeting in Portsmouth to identify “Phase 1” priorities.

April 2012: Letter from USEPA permitting a “phased schedule” for sewer improvements.

May 2012-Jan. 2013: Biweekly conference calls.

Feb. 2013: Public Meeting: Administrative Order on Consent



Phase 1 Projects

- 1) Grandview Avenue Area Surface Flooding
- 2) Grandview Avenue Area Basement Flooding
- 3) Inflow and Infiltration of Stormwater into the North Moreland Sewers
- 4) Reduce Combined Sewer Overflows at Lawson Run Wastewater Treatment Plant (CSO #2)



Grandview Ave. Area: Two Separate Issues

- Basement flooding
 - Downspouts adding significant flow to 18" Redwood Alley Sewer
 - 60,000 gallons in a 1" rainfall enter the sewer from downspouts
- Surface flooding
 - Only occurs during severe rain events



1) Surface Flooding - Grandview Ave. Area

Two documented occurrences in past 25 years:

- March 1, 1997
- June 4, 2008



2300 block Grandview Ave.
(Alley west of Grandview)



PORTSMOUTH
DAILY TIMES

Volume 146, No. 343

Sunday, March 2, 1997

\$1.00

Flood devastates area

The roof was the only place to go

By **ROGER ALFORD**
Times Staff Writer

It was like a nightmare, but Lanita Lytten was wide awake, sitting on her roof in the pouring-down rain with a raging flash flood reeking havoc on her car and home.

"I thought, this can't be happening," said Lytten of Lakeview Avenue in New Boston.

Lytten said the scene she awoke to Saturday morning will be forever etched in her memory.

It was about 7:30 a.m. when she looked out her window and saw water running down the street where her red Camaro was parked. Just to be safe, she moved it to higher ground, and went back inside. Her boyfriend and neighbor were there. None of them expected what would happen next.

But it happened - the car came floating back down the street.

A flash flood had sent rushing water through her yard and up to the windows of her small, one-story frame home.

"We swam against the current and got on top of a neighbor's truck, and then climbed onto the roof," she said. "As soon as we got up on the roof, the truck floated away."

Standing at the corner of Maple and Lakeview about 3 p.m. Saturday, Lytten could still see her inundated house. The red hood of her sports car was sticking up out of the yellowish water that remained.

Millbrook Lake, which has been empty for years and transformed into a city park, was refilled, higher than it had ever been before.

The force of the water stacked cars on top of one another along Lakeview Drive.

Just how many homes and cars were damaged is yet to be determined, said Mayor James Warren. He said he will try to put a dollar value on it as it becomes more apparent.

"It's just hard to assess at this point in time," he said. "It probably will run into the millions of dollars."

As for Lytten, she could see from

Please see **ROOF/A5**



GETTING SOME HELP -

Rescue workers, top, assist Lanita Lytten, left, and Mike Warner, third from left, to safety, moments after being rescued from their flooded home on Lakeview Avenue in New Boston. Rescue workers, right, patrol the streets in New Boston in search of residents that may need assistance from their homes.

Scott Osborne/Cody Times

Freakish storm caused flooding

By **ROGER ALFORD**
Times Staff Writer

A series of storms trailing back to back like train gondolas passed over southern Ohio and caused severe flooding on Saturday.

Julie Dian, a meteorologist at the National Weather Service office in Wilmington, said up to 5 inches of rain fell in some areas, causing flash flooding and mud slides across Scioto County.

"We're estimating at least 3 inches of rain countywide, with some areas up to 4 inches and some up to 5 inches in a little more than 12 hours," Dian said.

Additional rainfall - 1 to 3 inches - was possible before the system passed through this morning she said.

"This type of storm system is most often seen in the spring," Dian said. "It's one storm, followed almost immediately by another and another. You can think of it, more or less, like everything staying on

Please see **STORM/A5**

Several reported missing in Adams County

By **MARTIN POSTON**
Times Staff Writer

Several people have been reported missing in Adams County following severe flooding in the Southern Ohio region.

Two of those people are feared dead, according to Fred Starcher of the Adams County Emergency Management Agency. However, there is no confirmation yet from the Coroner's Office.

The Great Brush Creek flooded its banks at approximately 4 a.m. Saturday, after an estimated five inches of rain fell in some areas of the county. The creek was at least eight feet over its 15-foot flood stage Saturday afternoon.

An estimated 30 to 40 homes were total



Rhodes Ave. turned into raging river

Oldtimers can't remember anything like it

By STEVE TRIPLETT
Times Staff Writer

Bryant Bentley, and Kenneth and Bernice Ployd watched curiously as big trucks sped down Rhodes Avenue sending water splashing toward the one and two-story homes lining the street in New Boston.

"They really shouldn't do that," said Bentley. "They are splashing water up into those people's homes."

The group was standing between two of the New Boston Kiwanis apartment buildings. They were not alone. People lined the street watching curiously as the water rose, and rose, and rose.

"This is just awful," said Bentley, a Rhodes Avenue resident. "I've never seen anything like this."

Bentley wasn't the only one.

Residents in the Lakeview Avenue area

"We started putting stuff up on tables. It started coming in the door about 15 minutes later so we went out and climbed on the van and onto the roof of the house."

— Patrick Williams, resident

of New Boston were literally swept out of their beds, away from their breakfast tables and onto their roofs Saturday morning.

There they waited until volunteers in boats could rescue them. The refugees were taken to York Street where they departed the boats and were taken to the New Boston Community Center or the homes of friends or family for shelter.

"We had 20 to 30 people on roofs here," said New Boston Police Chief Gary Stone after he stepped off a small boat on Lakeview Avenue just after noontime.

From where he stood the New Boston Pool was well under water as well as most of the homes in the Lakeview area to the north.

"We had 100 percent cooperation of the community this morning," said Stone of the quick evacuation.

Stone reported no one had died from the flood, but there had been four or five people taken to Southern Ohio Medical Center for shock related problems.

According to Stone the Lakeview area was the hardest hit by the flash flood but there were other problem areas as well.

"One of the worst hit areas was Rhodes Avenue where two lanes of U.S. 52 have been shut down," said Stone. "We are telling people at 2 p.m. that all sightseers are going to have to leave the area. We are closing the area and we want people to stay out."

Stone said he expected the water to go down quickly but it was going to be a while before people would be allowed back into

Please see **OLDTIMERS/A5**

Commissioners declare state of emergency

By MARTIN POSTON
Times Staff Writer

An unusual weather pattern appears responsible for dumping large amounts of rain on Scioto County Saturday.

As of 11 a.m. Saturday, three inches of rain had fallen in a span of twelve hours, according to Kim Campbell, Director of Scioto County Emergency Management Agency.

"This has prompted County Commissioners to declare a county-wide state of emergency," Campbell said in a statement.

"Scioto County Engineer Clyde Willis said that severe flooding has damaged pipes and bridges throughout Scioto County and has undermined their approach."

A warm front to the north of the area and a cold front to the west created a system of storms drawing from large amounts of moisture from the Gulf of Mexico, following a path close to that of the Ohio River, Innes said.

According to the *Associated Press*, cooler and drier air will spread in behind a cold front with the rain ending today. The front brings an end to the warm temperatures and shifts the rain eastward. The temperature is expected to remain in the 40s much of the day.



J.S. Nuses/Only Times

IN THE MUCK — Steve Hamilton of Stanton Avenue in New Boston along with several others helped clear storm drains covered over with debris.

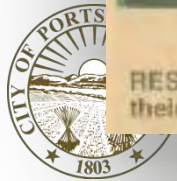


SCIOTO COUNTY FLOOD



Scott Osborne/Daily Times

RESCUE - Residents, friends, and neighbors pull together to aid rescue workers in bringing those that had to be rescued from their homes to safety here on Maple Avenue in New Boston.



- Nile Township
- Porter Township
- South Webster
- Otway
- Washington Township
- Valley Township

Multiple rescues and evacuations, tornado sightings, bridges washed out



Incidents reported throughout the county

The following is only a partial summation of occurrences during Saturday's flooding in Scioto County. Other departments contacted were not available at press time.

- The Nile Township Fire Department in Buena Vista reported numerous emergencies during Saturday's flash floods.

Mr. and Mrs. Steve McGraw and their children were rescued by neighbors Phil Staker, Ed Sommers, and Terry Dale Boland. Boland suffered a broken ankle in the rescue effort, and was transported by Nile Squad 1 to Southern Ohio Medical Center's Mercy Campus.

Other firefighters from the Buena Vista station were also involved in lifesaving rescues. Volunteer firefighter David Cooper sustained eye injury during such an attempt and was transported to SOMC Mercy Campus.

At press time, all Nile Township Fire Stations were on 24-hour call.

- Keni Madden, a Porter Township Trustee, reported the Garden City area, Beecher Street, Gallia Pike and Goose Creek all received at least two inches of rain. It was also reported that road crews were out clearing debris, and Porter Township firefighters are out to assist anyone who needs it.

At 9:50 a.m., Porter firefighters were called to assist South Webster with a boat, on a report of people trapped inside a submerged vehicle. Upon arrival, the occupants had escaped. While on patrol, a Porter firefighter spotted a dog on top of a doghouse,

attached by a chain. The dog was rescued.

At 1:17 p.m., firefighters engaged in tornado protocol when a report came over the scanner from the National Weather Service, regarding a tornado sighting on the east side of the county, heading directly toward Wheelersburg. A minute later, the report was canceled. The tornado sighting was near Wheelersburg, Ky.

- The Otway Community Center was opened Saturday morning so that residents could have shelter.

- Capt. Wayne Stewart of the Washington Township Fire Department reported that nine residents were evacuated from Dry Run Road at approximately 8:15 a.m. Saturday. Residents could not be reached by vehicles, and six firefighters walked about two miles, most of which was through water, to where residents were trapped. Along the way, firefighters found a boat floating around. They managed to catch it, and used it to move residents out of the area.

Stewart also reported approximately 20 residences with four to five feet of water, 10 bridges were washed out, and a variety store partially collapsed.

- Valley Township Fire Department assisted Rush Squad 2 in the rescue of a family on Pollock Road Saturday. A hovercraft from Anderson Township in Hamilton County also assisted.

Assistant Fire Chief Terr Gahn reported that there were not many runs in her department Saturday, but the department will continue to monitor low areas.

SCIOTO COUNTY FLOOD



J.S. Moore/Daily Times

EMERGENCY SPLASH – An ambulance drives through the flood waters in front of Whitey's Bike Shop in New Boston Saturday morning.



NEWSMAKER

Guest Speaker

Congressman Ted Strickland



Strickland was the Keynote Speaker at the Portsmouth Association to Life Underwriters' February meeting. After opening remarks by Strickland the meeting changed to a question and answer format. The PALU wishes to extend a public "Thank You" to Representative Strickland. Pictured above, (l-r): Clark Thompson, LUTC Educational Chairman, Rep. Ted Strickland, Jeannie Dillon, President.

COMMUNITY COMMON

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VOL. XV, NO. 43

SUNDAY, MARCH 9, 1997

NEWS NOTE



Farmer of Year

James (Jim) Pertuset

Pertuset (above, center) was named Farmer of the Year at the spring Business Farm Banquet at the SOMC Friends Center Thursday evening. Pertuset, who farms acreage in Scioto County, manages hog and cattle operations and transports grain and agricultural products. Pertuset was one of the first innovators of the "no-till" process of farming. He is shown with Mary Moore and Dan DeSantis of the Southern Ohio Growth Partnership. Photo by Natalie Rockwell

Federal Funds For Flood Cleanup

By MIKE DEATERLA
COMMUNITY COMMON
Residents, businesses and local government entities affected by flash and river flooding are encouraged to apply for federal assistance programs made available as a result of a disaster declaration issued by President Bill Clinton on Tuesday.

As of press time, 16 Ohio counties, including Scioto, were included in the federal declaration requested by Ohio Gov. George Voinovich, which makes state and federal assistance programs available to flood victims.

A toll-free application telephone number is now

operational for those affected in the counties who sustained property damage or loss. The number established by Federal Emergency Management Agency officials is 1-800-462-9029, and for the hearing impaired, 1-800-462-7583. The number may be called between the hours of 8 a.m. and 8 p.m. daily until further notice.

"Phone-in application has proven to be the simplest, quickest and most efficient way to apply," said Dale W. Shipley, State coordinating officer for the Ohio Emergency Management Agency.

See 'Cleanup,' 9A

2,500 Homes Damaged; 300 Destroyed

By MIKE DEATERLA
COMMUNITY COMMON
Scioto County residents are beginning a new week with a monumental task ahead—cleaning up and launching recovery efforts in the wake of severe flash and river flooding.

The Ohio River crested Wednesday at a flood stage of 59.8 feet and, as a result of Wednesday morning rains,

remained steady throughout the day before beginning a slow descent.

The river was expected to continue falling slowly through the weekend, with a 45-foot level possible by Sunday. According to the National Weather Service, the river stage at the Greenup Dam, measured at 60.6 feet Thursday morning, was expected to fall below the flood stage of 54 feet

by Friday afternoon.

The river's crest, lower than initially anticipated, was aided by an early crest of 28 feet on the Scioto River at Piketon, where that river had fallen to a level of 11.6 feet by Thursday morning.

Scioto is one of 16 Ohio counties impacted by severe flooding and included in state and federal emergency declarations which make victims in those

counties eligible for funding assistance in the form of grants and low-interest loans, as well as technical expertise to those individuals and businesses having needs not met by insurance and volunteer organizations.

Preliminary FEMA estimates indicated more than 2,500 homes impacted by flooding, with an

See 'Flood,' 9A

Local Doctor Helping Flood Victims Johnson Lends A Hand As A National Guard Officer

By JASON LOVINS
COMMUNITY COMMON
Terry Johnson is known to patients as *The Doctor* at Southern Ohio Medical Center's Urgent Care Center in Wheelersburg, but this week, he's *The Major*.

Major Terry Johnson is commanding the Company C, 237th Forward Support Battalion of the Ohio National Guard, which has been deployed to provide medical support for more than 800 soldiers helping flood relief efforts along the Ohio River.

"This is why I wanted to be in the Guard in the first place," Dr. Johnson says. "I wanted to be able to assist when we are in a state of emergency."



Taking Extra Steps

By MIKE DEATERLA
COMMUNITY COMMON

In the wake of severe flooding across Scioto and neighboring counties, officials remind affected residents to take precautions with regard to basic health and safety issues.

This past week, the Scioto County Emergency Operations Center, in conjunction with the state Department of Health, Red Cross and state Department of Agriculture, assisted in coordinating efforts to provide bottled water from private suppliers to areas reporting need for drinking water supplies.

The Ohio National Guard also provided potable water and has transported other water supplies to impacted areas. Communities still in need of drinking water should contact the Emergency Operations Center.

The Pepsi Cola Bottling Co. at Franklin Furnace this week responded by contributing more

See 'Steps,' 9A

County

News Bulletins

FLOOD DISASTER FUND: A flood disaster fund has been established for the Village of New Boston. Monetary donations can be made at any Star Bank branch. Food and clothing can be donated for needy families at the New Boston Community Center. Anyone wishing to donate furniture or large items can call 456-4103 for more information.

CLAY FUN FAIR: Crafters are needed for a big Clay Fun Fair to be held April 19, from 12-5 p.m. at Clay High School lot. Table space is \$10. For more information call the Clay P.T.C. at 456-4681. More than 1,000 people are expected.

FREE TAX HELP: Free income tax assistance is available at



1803



AP/WIDEWORLD/Time

CLEARING DEBRIS — Darin Grandin, truck driver for Boone Coleman, watches volunteer Don Cox use a bulldozer to try and clear some of the debris from Lakeview Avenue in New Boston Monday morning.

Flood-ravaged towns begin to rebuild

CINCINNATI (AP) — The Ohio River is receding, but that's only part of the news welcomed by victims of last week's flooding. The other part is that hundreds of displaced people are beginning to see signs of relief in the form of federal housing assistance checks.

In Ohio, where state officials and the Federal Emergency Management Agency have received more than 4,000 requests for aid, 286 checks totaling \$296,000 have gone out to help flood victims with temporary housing.

"This early in the recovery process, our concern is for people's housing needs," David Skarski, FEMA coordinating officer, said Monday. "For some, the housing assistance check is just the first check they will receive."

Last week, refugees needed truck and boat rescues, emergency shelter and food. On Monday, they needed maps, pills and endless patience.

All along the Ohio's steep banks, government workers, residents and business owners began the task of sorting out ruined property and washing away mud and trash. State and federal officials were assessing damage to roads and other public property as the floodwaters receded.

Gov. George Voinovich planned visits today to flood recovery centers at two sites in southern Ohio, and a tour of flood-damaged Jackson.

A toll-free telephone line — 800-462-9029 — has been set up for relief applications in the 16 Ohio counties that qualify for FEMA relief. The number can be used to apply for a variety of state and federal assistance.

The river fell back to flood stage of 53 feet at Cincinnati around 11 p.m. Monday, after reaching 64.7 feet Wednesday. It should continue to slowly drop, said meteorologist Steve Rowley of the National Weather Service in Wilmington.



AP/WideWorld/Time

CLEANING UP — Stephanie Craft tries to push out the mud in her kitchen Monday afternoon on U.S. 52 in West Portsmouth.



Governor visits area

State to pick up the tab

By SARAH POTTER
Times Staff Writer

In his visit to Scioto County Friday, Gov. George Voinovich announced that residents of New Boston will not have to pay any local taxes to help rebuild their water ravaged village.

Voinovich, who cut his trip to the Far East short, spent Friday visiting areas in Clermont, Adams and Scioto counties with a representative from the Federal Emergency Management Agency to further estimate the damage caused by last week's flood.

"We're going to pick up the local share," Voinovich told the residents who paused briefly from cleaning up the muddy debris out of what is left of their homes.

When providing public assistance after a disaster, FEMA pays 75 percent of the cost to rebuild things like roads, bridges and school buildings. The state and local government generally split the remaining 25 percent.

Voinovich said the people of New Boston already have too much to worry about so he decided the "state would pick up the tab for their share."

"We decided this morning that the state will pick up that 25 percent so that the local people can go ahead and

not worry about where the next nickel is coming from to get the job done," he said.

Mike Dawson, Voinovich's press secretary, said that this kind of cost would be devastating to many small community budgets.

Dawson said that picking up the tab is only done occasionally and this will be the first time it is being offered for the Flood of '97.

After coming out of the Lakeview Avenue home of Gary and Shirley Spears, Voinovich said, "People will never forget this. They are thinking, 'we will never get over it. How are we ever gonna do it?' The thing is, it will get done."

"I just want them to know that we are going to do everything we can as a state to give them the help that they need," he said.

Voinovich was impressed with the clean up efforts being done by residents of the village.

"What it basically says is that we've got good people. The communities have come together in an extraordinary way. It just reaffirms your faith in people and the fact that they care about their fellow man, and when they're in need they all pull together to help out," he said.



J.S. Wilson/Daily Times

POINTING IT OUT - New Boston Police Chief Gary Stone, and Mayor Jim Warren, far right, speak with Governor George Voinovich, center, about the flooding and the massive cleanup yet ahead.

IRS grants tax relief for flood victims

The only way to ride

Fire Departments: Areas beginning to recover

Times Staff Report

clothing has been gathered at the fire station, according to

Discussing the situation



J.S. Moses/Daily Times

Congressman Ted Strickland and New Boston Mayor Jim Warren talk about the flood as they walk down Lakeview Avenue in New Boston to speak with the Governor George Voinovich Friday afternoon.

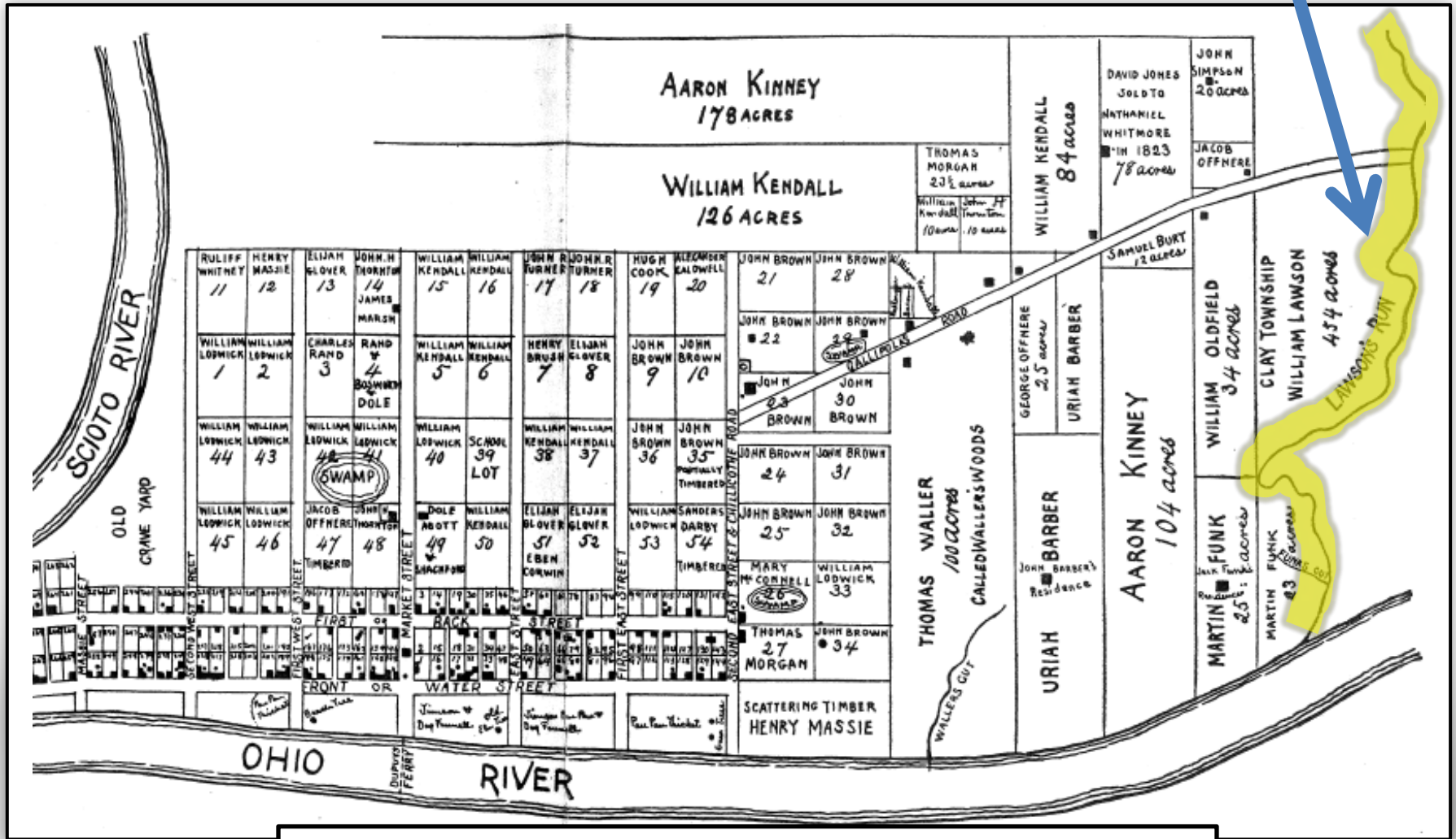


Lawson Run Sewer Facts

The Lawson Run Sewer drains 565 acres at 23rd St. & Grandview Ave.



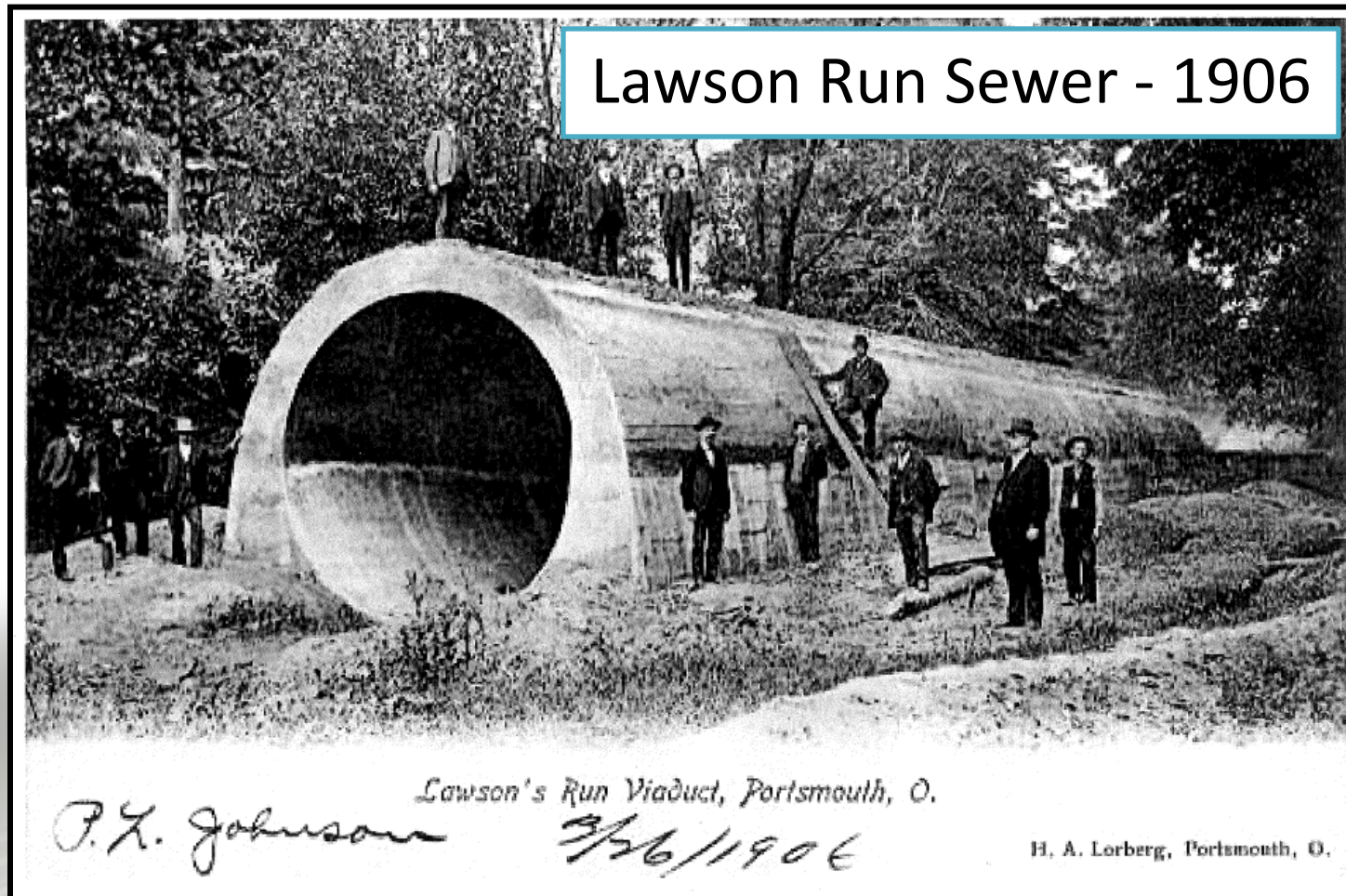
Lawson Run was initially a creek that ran through the City to the Ohio River



City of Portsmouth 1819



Lawson Run, the creek, was eventually enclosed in sections as the City expanded north and east, beginning in the early 1900s.



The Lawson Run Sewer is mostly brick starting at 7 feet in diameter at Coles Boulevard, growing to 12 feet at Charles Street.



2) Basement Flooding: Grandview Ave.

Incidents since 1997:

- January 2000 (8 residences)
- May 2001 (3 residences)
- May 2004 (12 residences)
- August 2005 (1 residence)
- July 2011 (2 residences)

Plus Major Surface Flooding:
March 1, 1997 and June 4,
2008



<http://www.waterdamagelocal.com>



Basement flooding
on Grandview Ave.
occurs due to back-
ups in 18-in.
Redwood Alley Sewer

NOTE: SOMC and
Hillview Retirement
Center are not
connected to
Redwood Alley Sewer

7-foot Lawson
Run Sewer

18-inch Redwood
Alley Sewer



3) Inflow and Infiltration of Stormwater into North Moreland Sewers

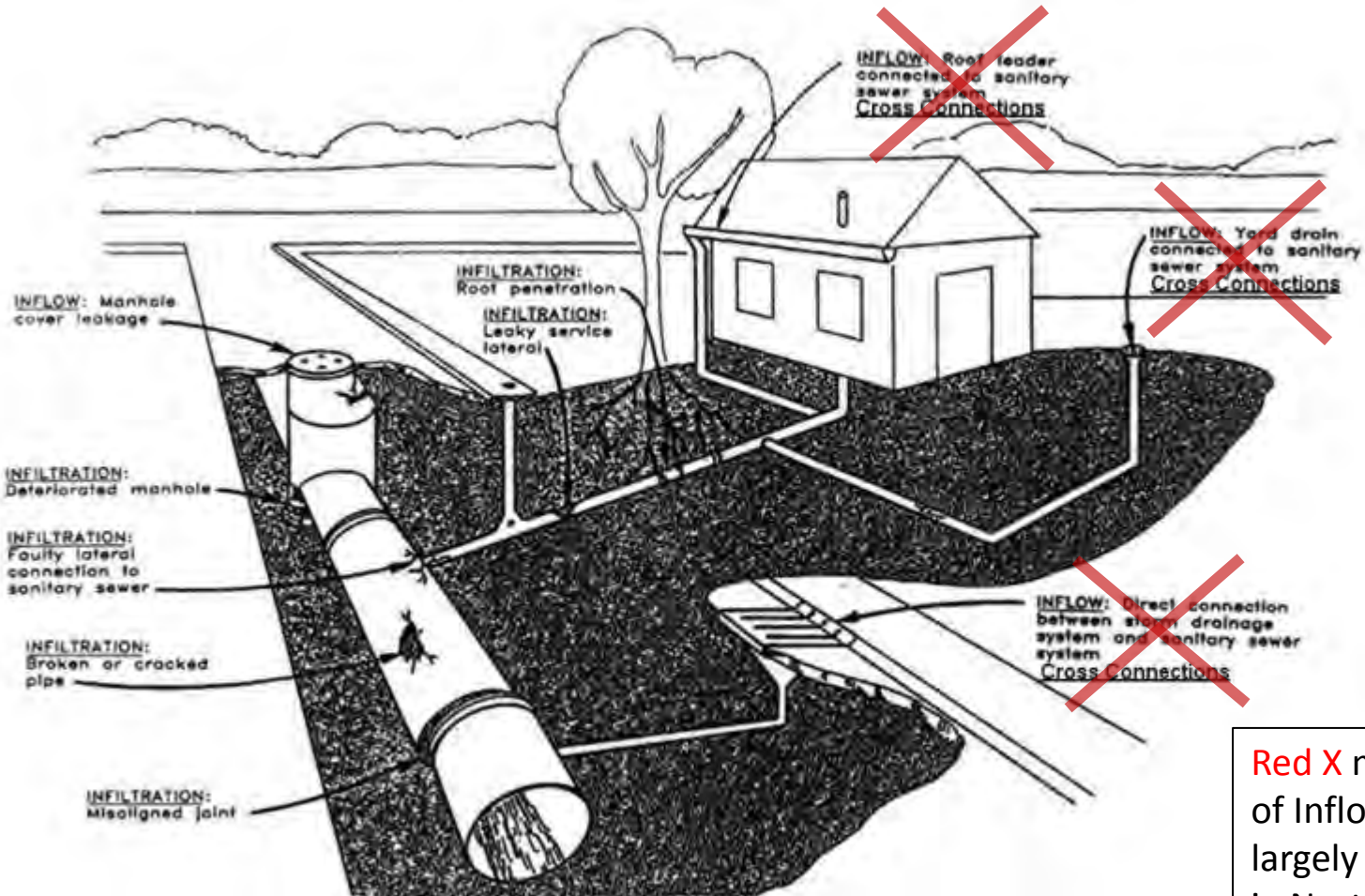


North Moreland Sewer Facts

- Much of North Moreland Sewer System was built in 1920s (approaching 100 year old)
- Clay tiles with mortar joints.
- Main sewer is parallel to and crosses under Munn's Run creek at several points. High water table in area.
- Rainwater causes sewer to overflow.
- Designated as a “sanitary sewer”, not combined sewer.
- **Sanitary sewer overflows are prohibited.**



Inflow and Infiltration



SANITARY SEWER INFLOW AND INFILTRATION (I & I) PROBLEMS

Red X marks sources of Inflow that have largely been removed in North Moreland



Inflow and Infiltration



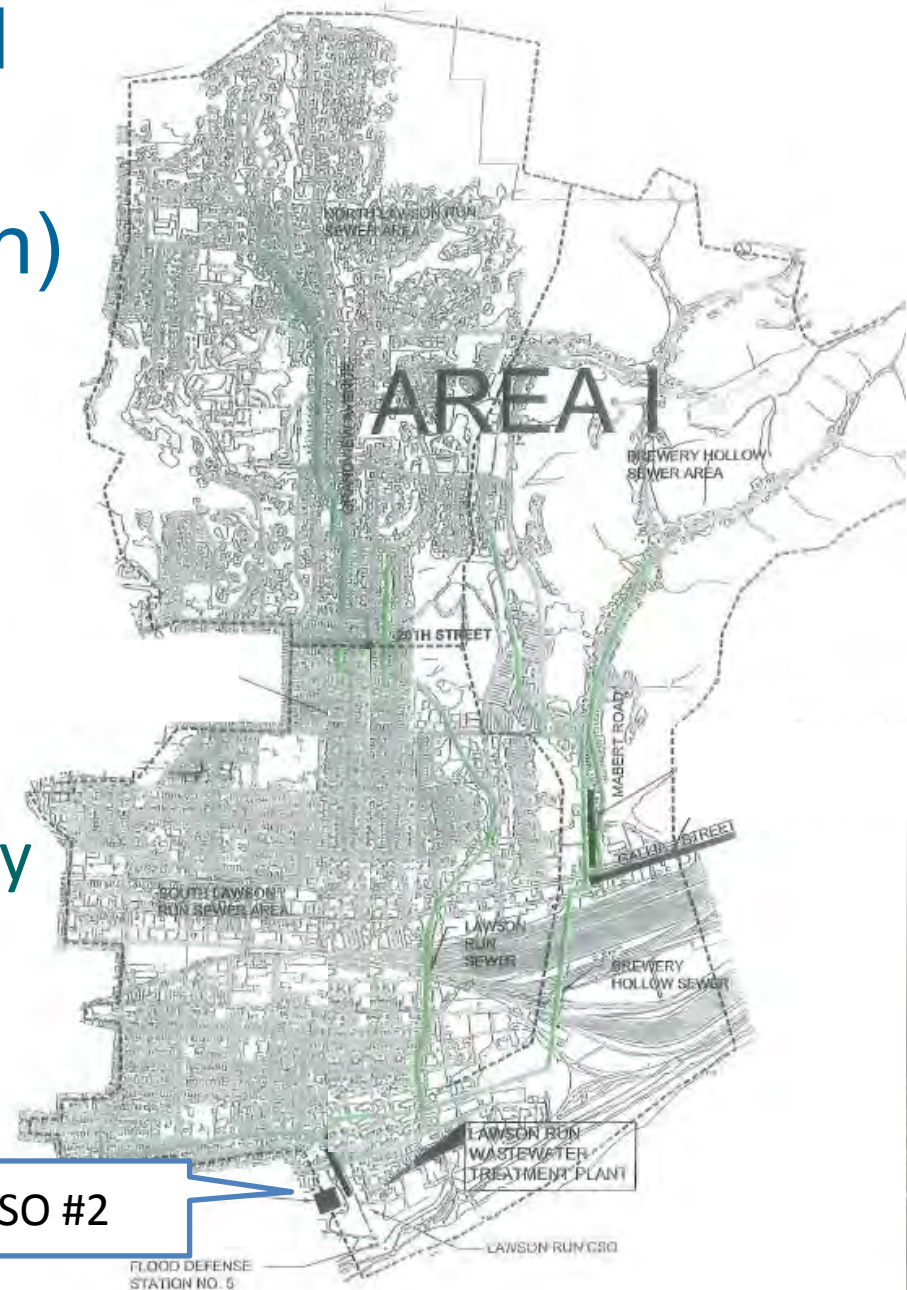
Infiltration: ground water that seeps into the sanitary sewer through cracks or joints.

Inflow: rain water that enters the sanitary sewer through holes in manhole covers, catch basins, or improper plumbing connections.



4) Reduce Combined Sewer Overflows at CSO #2 (Lawson Run)

- CSO #2 handles the largest drainage area in the combined sewer system (Area 1)
- Accounts for 54% of combined sewage in City
- Contains Lawson Run Sewer

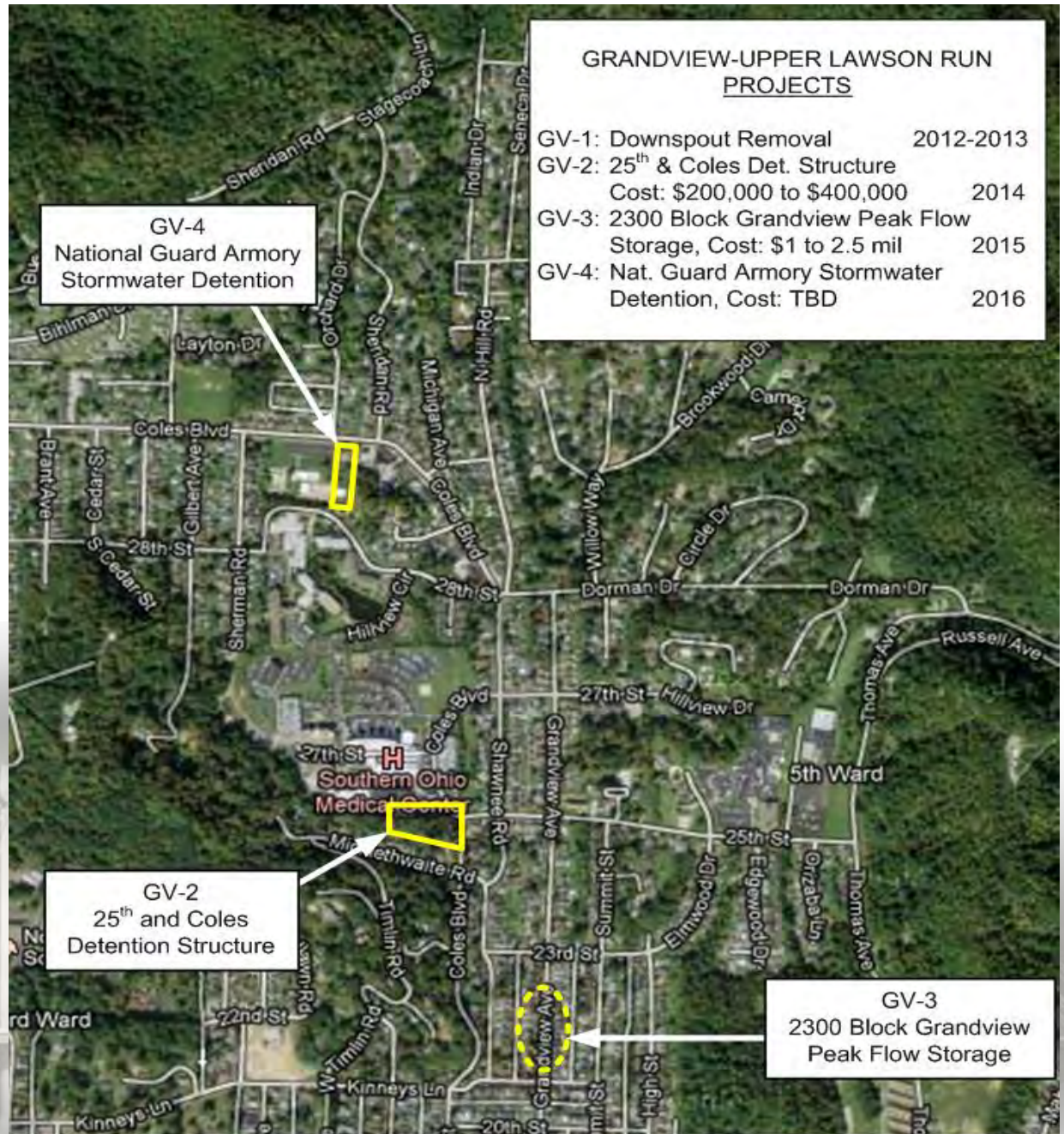


Phase 1 Projects

SOLUTIONS

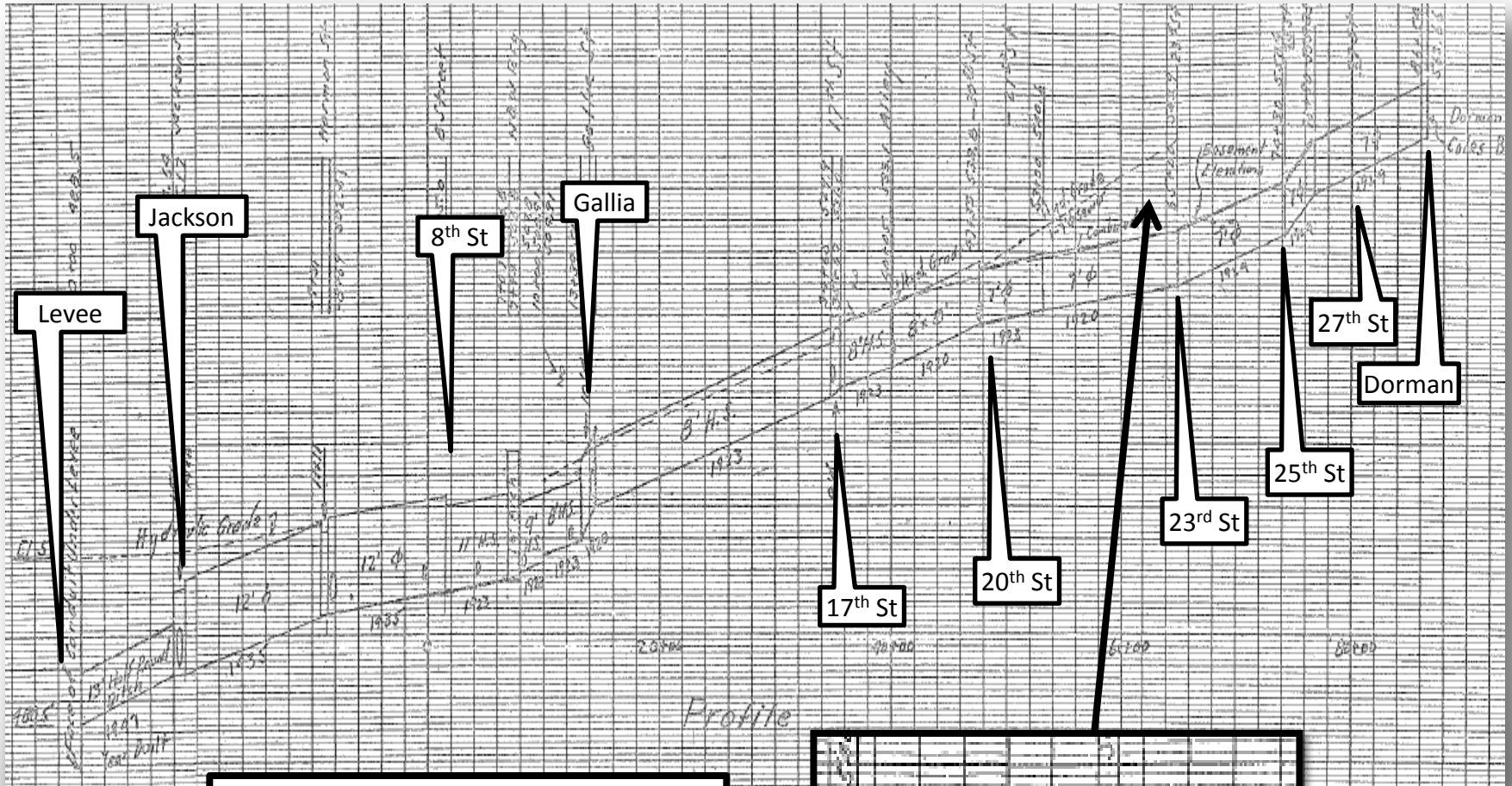


1) Surface Flooding: Grandview Ave. area



Pipe	Capacity (cfs)
11	873
10	619
9	548
8	464
7	349
6	540
5	608
4	584
3	490
2	489
1	332

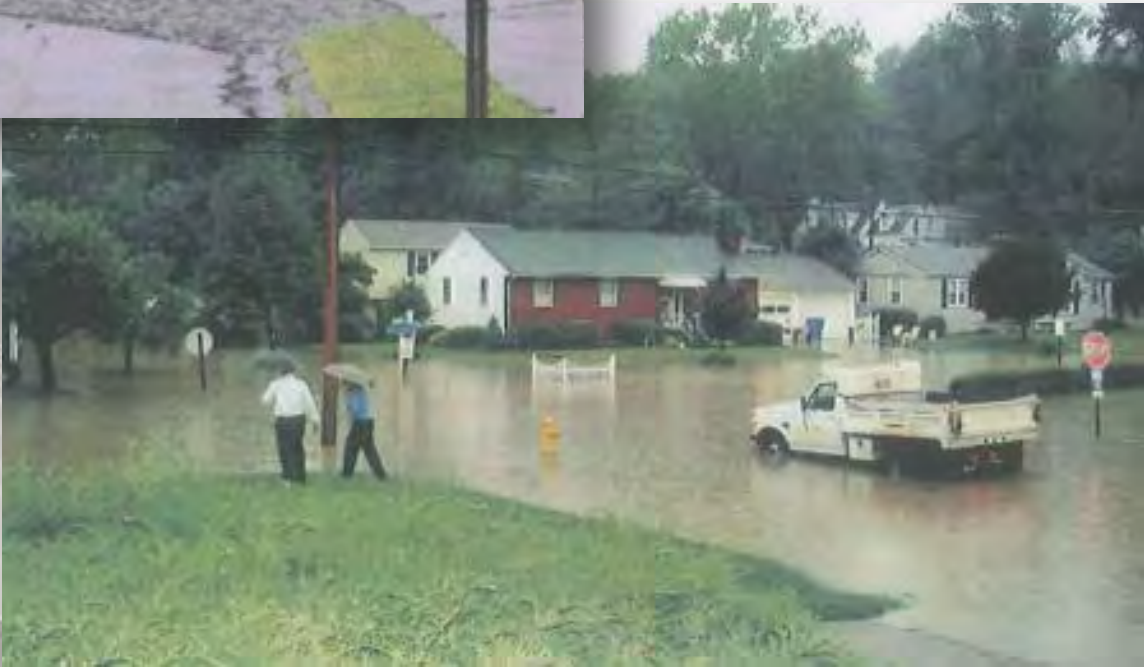




“Report on Stormwater Sewers”, February 1957
 By Greeley and Hansen,
 Engineers, Chicago



25th and Shawnee
June 4, 2008





Culvert south of SOMC drains approx. 10% of area



PROJECT GV-2

- Ravine drains 10% of area north of 23rd Street.
- Project would hold large amount of stormwater and release it at a slow rate to the Lawson Run Sewer.
(Stormwater detention.)



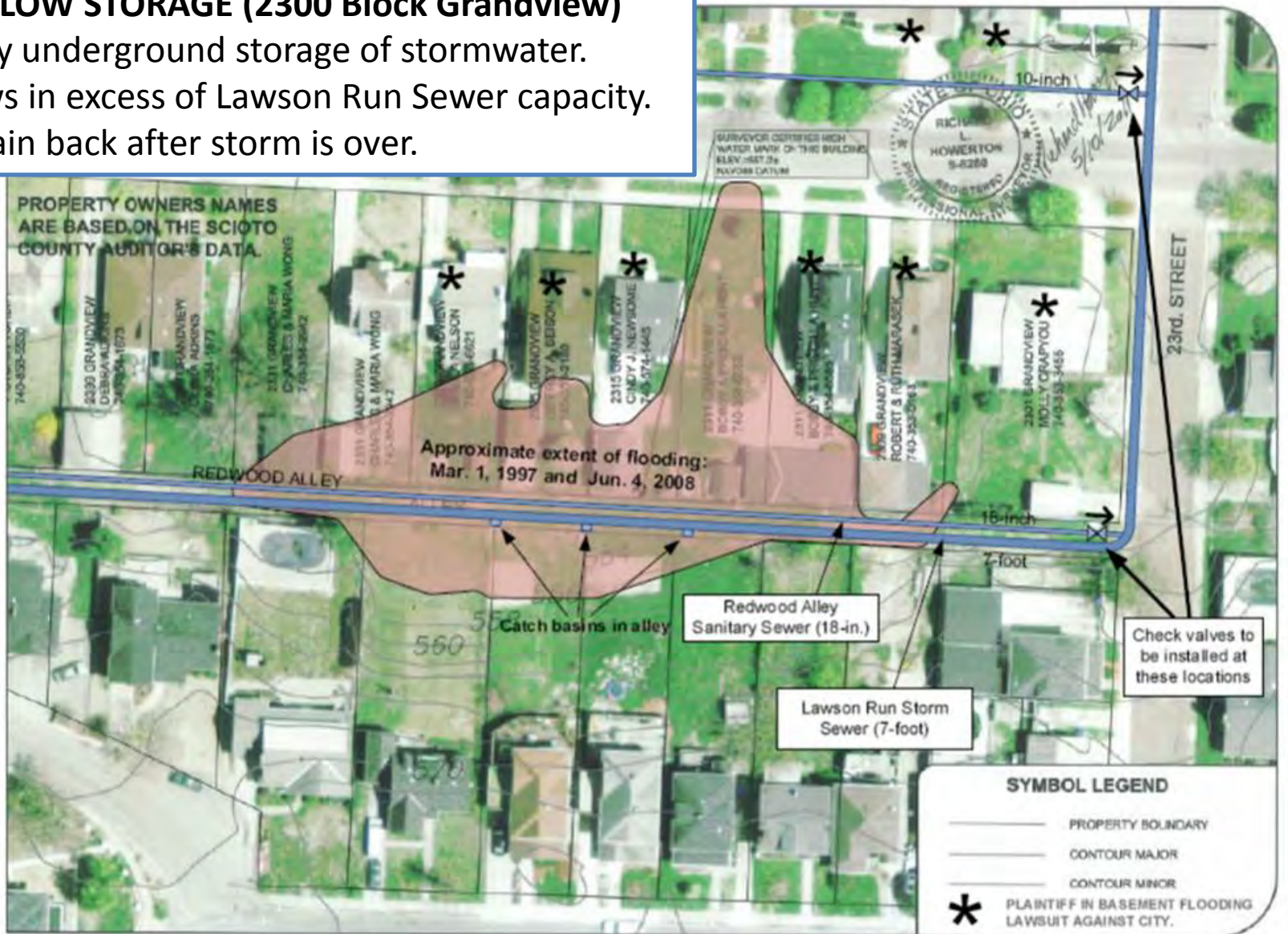
Preliminary Sketch

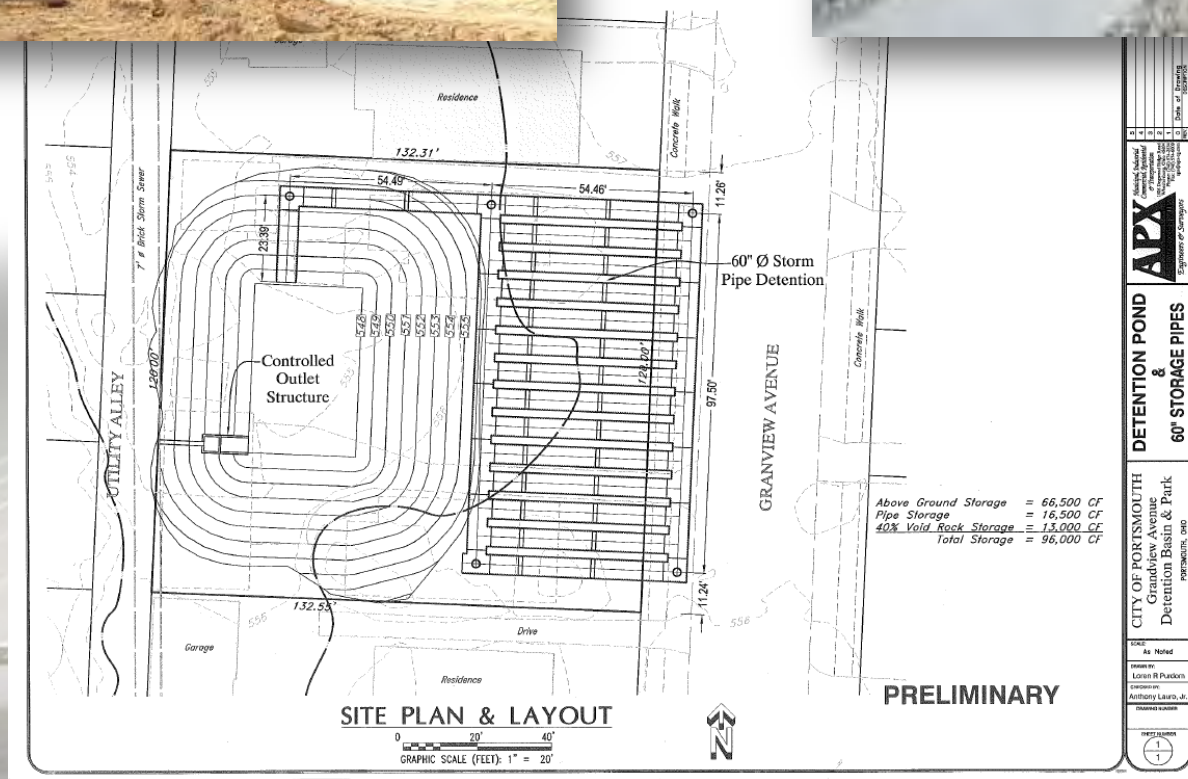


PROJECT GV-3

PEAK FLOW STORAGE (2300 Block Grandview)

- Temporary underground storage of stormwater.
- Store flows in excess of Lawson Run Sewer capacity.
- Would drain back after storm is over.





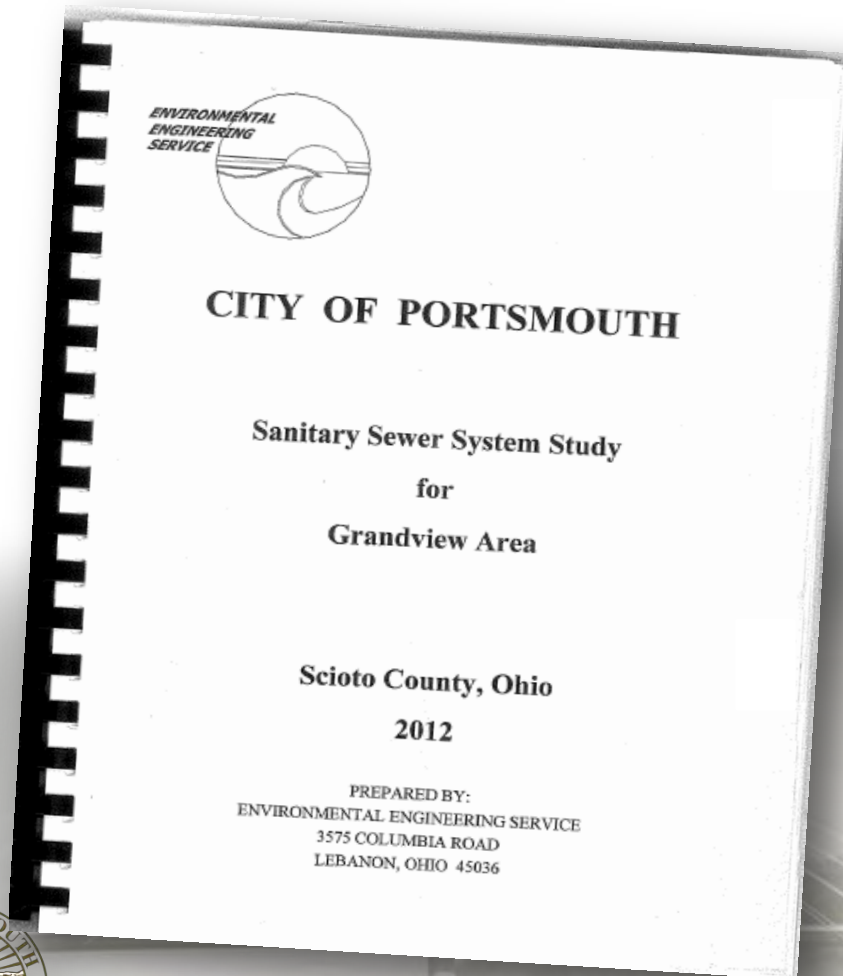
PROJECT GV-4

National Guard Armory-Coles Blvd.

- In discussions with US Army to add stormwater detention.
- Army has agreed to do the project.
- Not in Administrative Order at this time.



2) Basement Flooding: Grandview Ave. Area

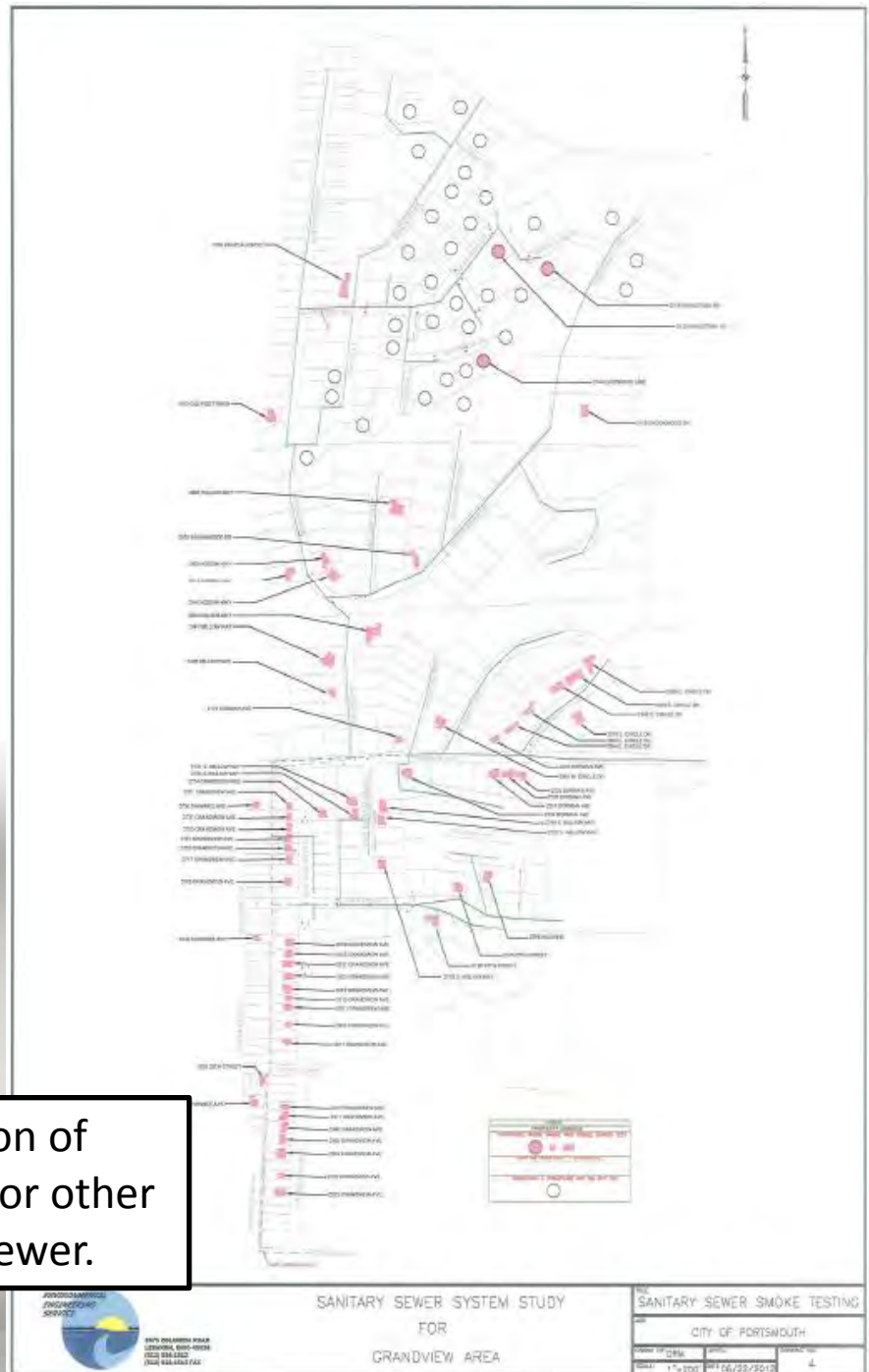


According to the Sewer System Study:

- * 47 downspouts and 16 broken private sewers or cleanouts are allowing rainwater into Redwood Alley Sewer.
- * In heavy rains the capacity of the sewer is exceeded causing basement backups on Grandview Ave.

US EPA directed the City to work with property owners to rainwater connections to the Redwood Alley Sewer.

Pink spots indicate location of homes with downspouts or other connections to sanitary sewer.

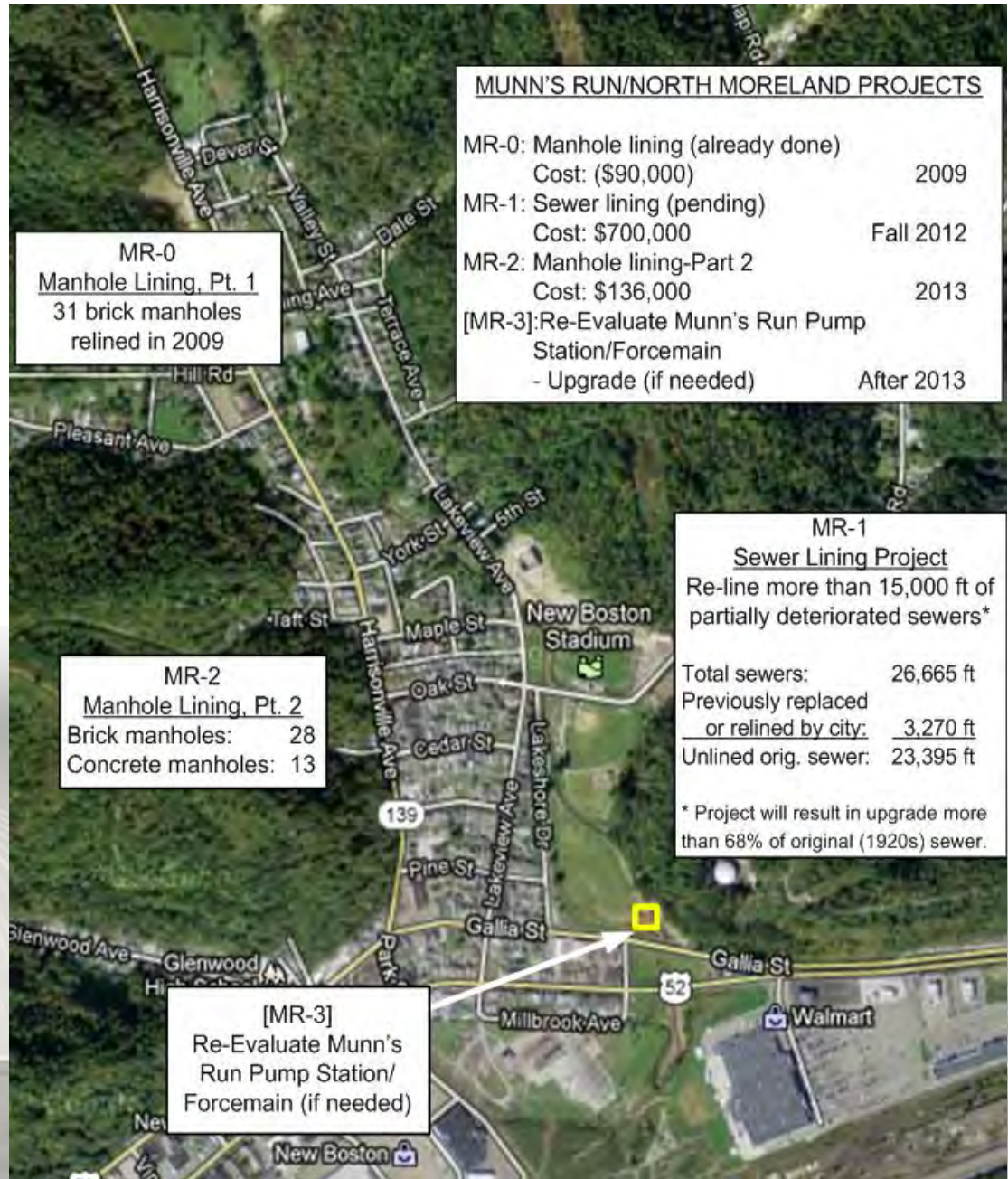


- July 2012: Grandview Area Sewer System Study and report completed.
- August 2012: Report sent to US EPA for review.
- Sept.-Oct. 2012: notice sent to 63 homeowners requiring disconnection of downspouts and other connections.
- January 26 and 29, 2013: Three meetings held with residents to discuss disconnection efforts.

TO DATE, 21 of 63 connections are believed to have been resolved. Efforts are ongoing.



3) Inflow and Infiltration of Stormwater into North Moreland Sewers



PROJECT MR-0 (Completed in 2009)
Relined 30 sewer manholes in North Moreland.
Total cost: \$90,000 (100% CDBG Grant Funds)

**Manhole Repairs
 In North
 Moreland Meet
 EPA Guidelines**

By FRANK LEWIS
 PDT STAFF WRITER

A \$90,000 project which began last week in the North Moreland area of Portsmouth will save taxpayers money, and meet a request by the EPA at the same time.

Manholes in that area, many of which are in deteriorated condition, are being repaired, and will be returned to a "like new" condition.

"They are doing about 30 manholes," Portsmouth Wastewater Department Director Rick Duncan said. "They go in and get them prepared. They're doing that right now, putting a grout on the inside of the manhole, and either later this week or next week, they're going to come in and spray a layer of an epoxy inside the manhole, so it will be like a new manhole when they get done with it."

The manholes will be repaired by lining them with a polyurethane coat-

Portsmouth Daily Times Tuesday, November 17, 2009

Moreland

From Page A1

ing to prevent leakage of groundwater into city sewers.

"That's going to reduce the amount of infiltration, groundwater that gets into sewers and manholes," Duncan said. "That will reduce our pumping costs at our pump station, and also it will address one of the concerns the EPA has about our collection system."

Duncan said the project is in compliance with a request from the Environmental Protection Agency. The EPA had written the city a letter two years ago saying the city needed to remove the Inflow and infiltration in the North More-

land area.

Duncan said the work is being funded with a grant from the Ohio Department of Development, and the work is being done by FeeCorp, Inc., a pipeline repair contractor from Canal Winchester.

The manhole repair project is the first phase of a larger project to repair and replace manholes and sewers in the North Moreland area. The second phase is expected to commence in the spring of 2010 with funds from the Ohio Public Works Commission.

The work on the current project should be completed by mid-December.

FRANK LEWIS may be reached at (740) 353-3101 Ext. 232



Wayne Allen
 Daily Times
 A \$90,000 project which began last week in the North Moreland area of Portsmouth will save taxpayers money and meet a request by the EPA at the same time. Manholes in that area are being repaired and will be returned to a "like new" condition. Pictured are Anthony Dye being lowered into the sewer, while Rob Webb lowers him down.



PROJECT MR-1 (Currently Underway: 2012-2013)
Reline up to 15,000 feet of deteriorated sewers.
Rehabilitation of up to 68% of original sewers.
Total cost: \$770,000

Fall 2008: Applied for Ohio Public Works funds
July 2009: Awarded funds

- \$400,000 grant
- \$250,000 zero int. loan
- \$120,000 city funds

2011: Requested extension of time from Ohio Public Works

2012: Contract awarded

July 2013: Contract completion



MR-1: Sewer lining technology



Lining of sewers is currently underway in North Moreland



PROJECT MR-2 (Planned 2013)
Reline 41 manholes (28 brick manholes, 13 concrete). All remaining brick manholes will be refurbished with this project.
Total cost: \$130,000 (100% CDBG Grant)

Manhole lining:
Phase 2



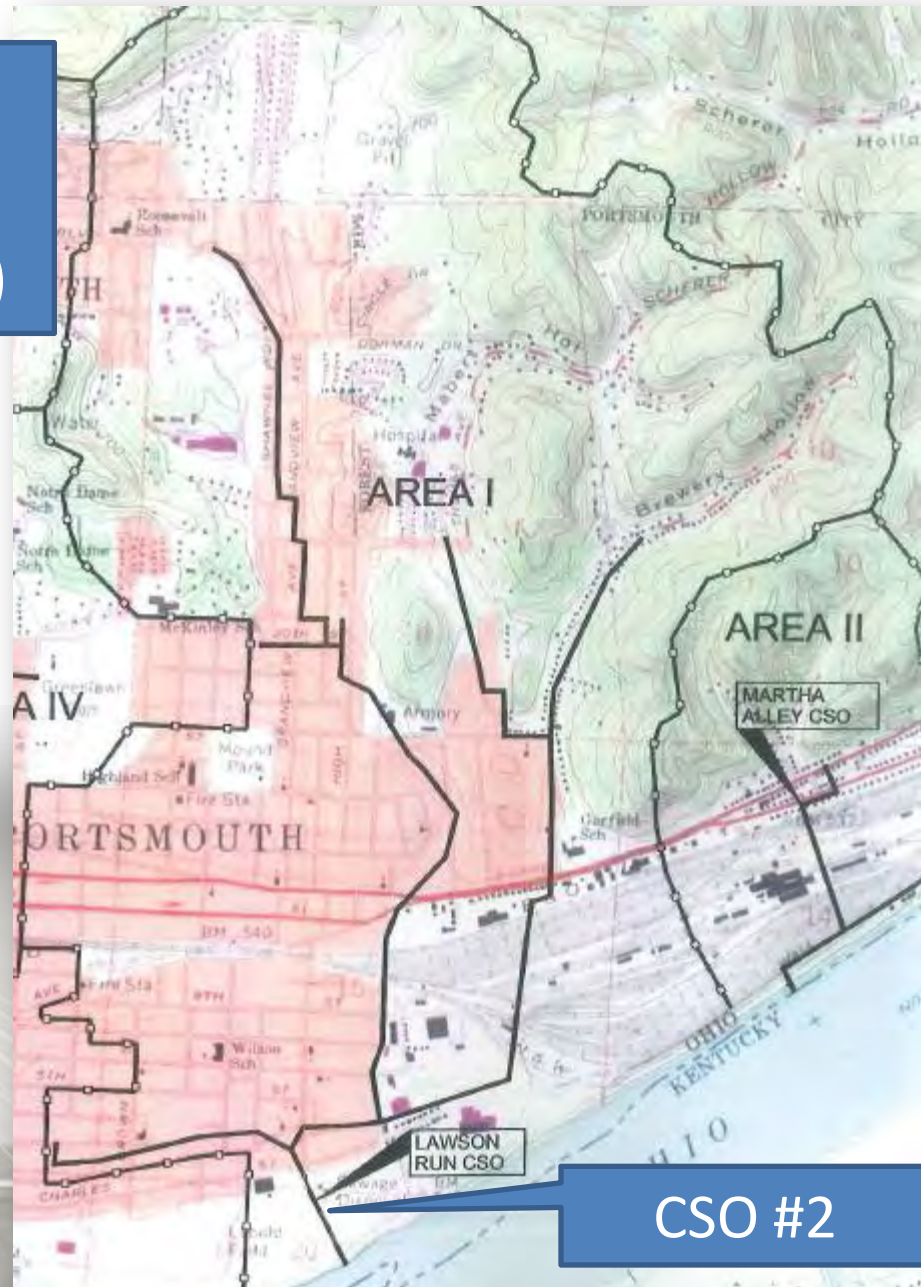
PROJECT MR-3 (To be determined)
Follow-up with additional work if necessary.



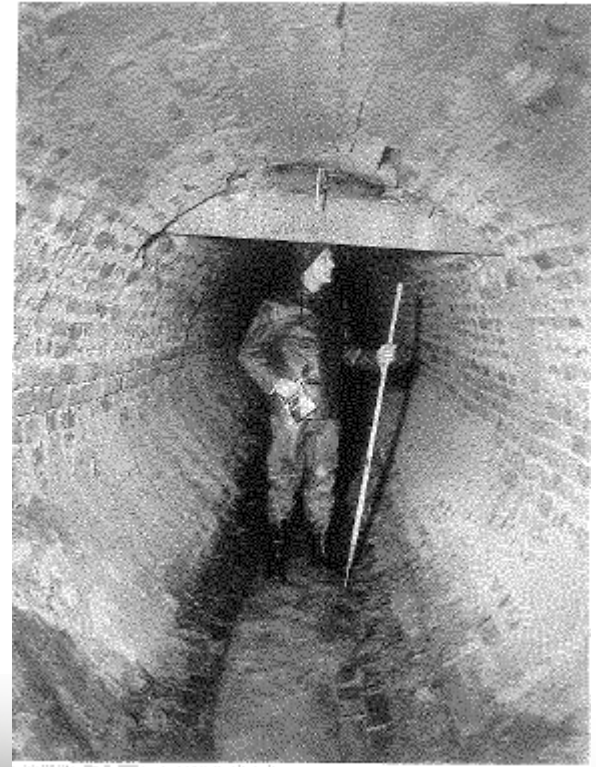
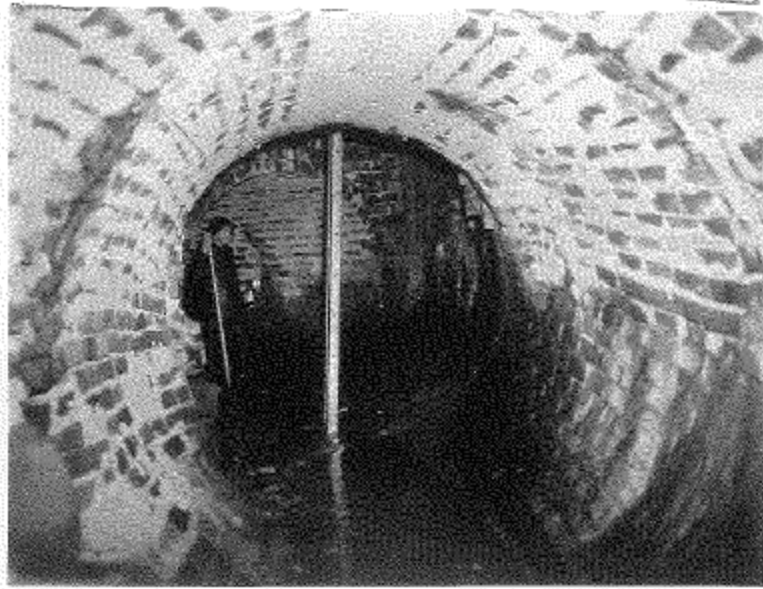
4) Reduce Combined Sewer Overflows at CSO #2 (Lawson Run)

Lawson Run Sewer drains 1,499 acres, and accounts for approximately 54% of City's Combined Sewer Overflows.

Several action items related to Lawson Run Sewer.



- Lawson Run Sewer is approaching 100 years of age.
- It runs beneath a major highway (US 52), multiple railroad tracks, and directly under several houses.
- It is frequently subject to surcharges.



Other than the Wastewater Treatment Plant...

**THE LAWSON RUN SEWER IS
THE MOST IMPORTANT PIECE
OF SEWER INFRASTRUCTURE
IN THE CITY OF PORTSMOUTH.**



The City has performed limited inspections of the Lawson Run Sewer.....



1962 Photo by
Billy Graham Photography



...but a complete inspection and analysis of the sewer with recommended O&M Plan is needed to protect City's investment.

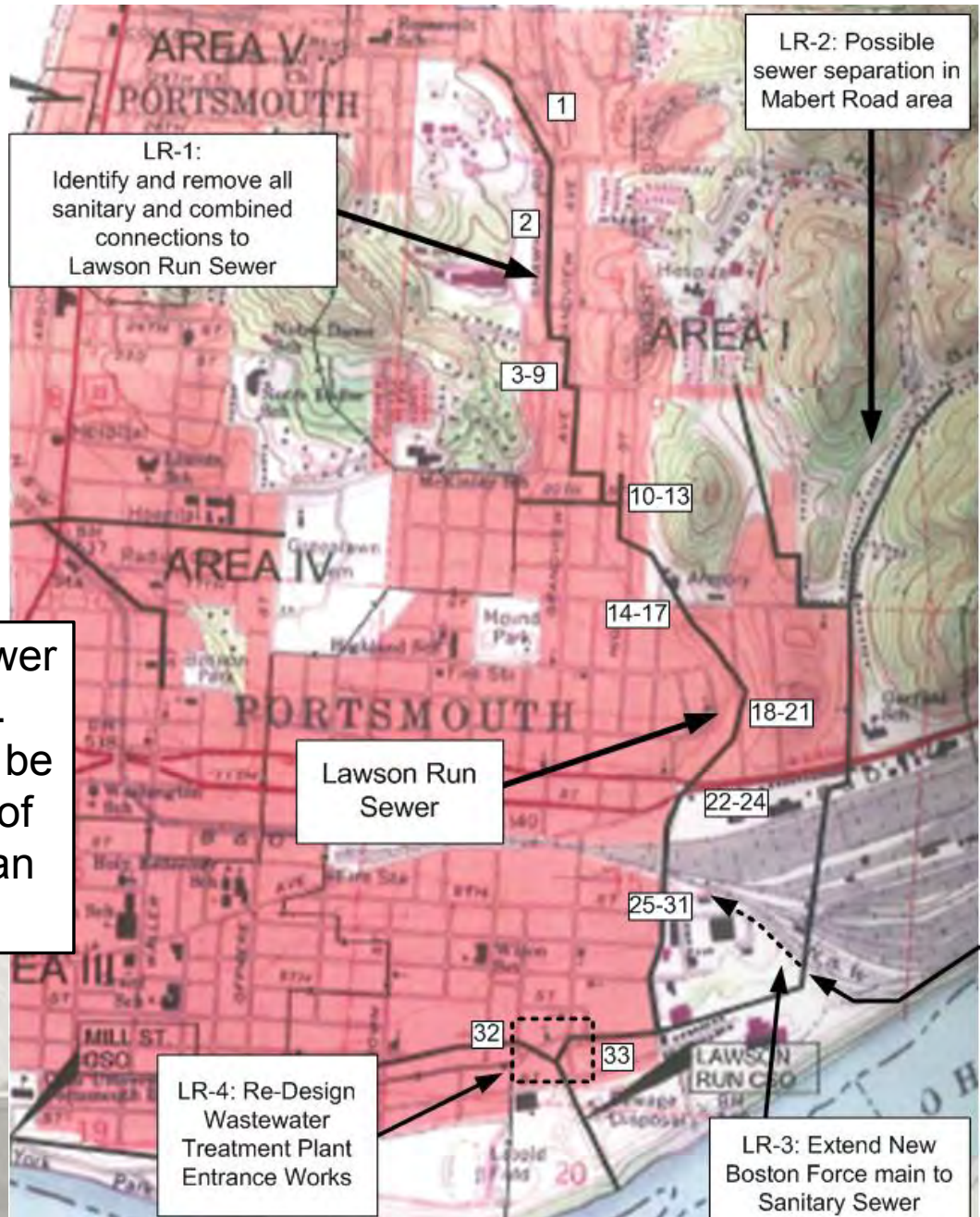


1962 Photo by Billy
Graham Photography



Conduct Lawson Run Sewer Separation Feasibility Study

There are 33 known sanitary sewer connections into Lawson Run. Many occur in clusters and may be addressed with the installation of lift stations and force mains to an appropriate sewer.



Lawson Run Sewer Separation Study

Separation of Lawson Run sewer

- *Portions may be done by in-house forces
- *Affordability analysis
- *Possible removal of more than 54% of combined sewage

Typical standard for CSO removal is 85%.



Lawson Run Sewer Computer Modeling

Computerized modeling of Lawson Run drainage area will determine if planned improvements are sufficient, or if additional stormwater projects are needed.



What is Phase TWO?

- **Further CSO elimination-depending on results of Lawson Run Sewer Study.**
- **Follow-up on North Moreland Improvements.**
- **Additional stormwater remediation.**
- **Downspout removal in other parts of Portsmouth.**
- **Sciotoville Improvements**
- **Phase 2 projects contingent upon affordability**



Regulatory Approach

- 2011 EPA officials agreed to re-negotiate an Administrative Order on Consent with City to address the most immediate priorities for public health and environment within an affordable budget

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:) DOCKET NO. V-W-12-AO-
)
CITY OF PORTSMOUTH, OHIO) PROCEEDING UNDER SECTIONS
) 308 AND 309(a) OF
RESPONDENT) THE CLEAN WATER ACT

STATUTORY AUTHORITY

The following Findings are made and Order on Consent is issued pursuant to the authority vested in the Administrator of the Environmental Protection Agency (the EPA) by Sections 308 and 309(a) of the Clean Water Act (the Act), 33 U.S.C. §§ 1318 and 1319(a). The Administrator delegated this authority to the Regional Administrator, EPA, Region 5, who then redelegated the authority to the Director of the Water Division, EPA, Region 5.

INTENT OF THE PARTIES

Tinka G. Hyde, Director of the Water Division, on behalf of the Administrator of the United States Environmental Protection Agency, and David Malone, Mayor of the City of Portsmouth, Ohio, on behalf of the City of Portsmouth (Respondent), enter into this Clean Water Act Section 309(a)(3) Compliance Order on Consent to establish a process by which Respondent will develop and implement appropriate measures as it works toward expeditiously achieving compliance with Section 301 of the Clean Water Act, 33 U.S.C. § 1311. In particular, this Compliance Order on Consent sets forth a series of agreed measures and a schedule that the Respondent will implement that will be the first phase of a multiphase process. The measures and schedule that Respondent will implement are set forth in the "Order on Consent" section of this document.



Summary of Administrative Order on Consent

- Submit an Overflow Emergency Response Plan (OERP)
- Prepare a Sewer System Management, Operation and Maintenance (MOM) Program
- Implement North Moreland Sewer Lining Project
- Submit Funding Applications for Planning, Design and Construction for Coles Street Retention Project and Grandview Ave. Storage Project



Summary of Administrative Order on Consent

- Initiate Engineering Agreements for Design of Coles Street Retention and Grandview Ave. Storage Projects
- Issue Letters to 47 Property Owners Requiring disconnection of downspouts in Grandview Ave. Area
- Perform Post-Construction Monitoring of Sewers
- Perform Inspection of Lawson Run Sewer
- Conduct Lawson Run Sewer Separation Feasibility Study



Summary of Administrative Order on Consent

Miscellaneous Requirements:

- Reporting of System Releases within 5 Days of Occurrence
- Bimonthly Progress Reports
- Annual Reports
- Monitoring at Munn's Run Pump Station



Summary of Administrative Order on Consent

Schedule:

- 04/01/13 Verification of Downspout Disconnection
- 04/01/13 Complete Visual Inspection of Lawson Run Sewer
- 07/15/13 Complete North Moreland Sewer Lining
- 12/31/13 Complete TV Inspection of Tunnel Sewers
- 12/31/13 Complete North Moreland Manhole Rehab
- 10/01/14 Complete Construction of 25th and Coles Street Retention Basin
- 03/31/15 Complete Construction of 2300 Block of Grandview Ave. Storage Project



Summary of Administrative Order on Consent

- North Moreland Sewer Lining
- Coles Street Retention Basin
- Grandview Ave. Storage Project
- Lawson Run Study & Inspection

Other Requirements of Order

- Increased cleaning /televising schedule
- Increased O&M (implications: staff and equipment)
- Increased reporting to EPA
- **Preventive vs. reactive approach**



Questions and Comments

