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### **LES August 8 Meeting Recap**

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Due to recent flooding events at Lake Erie Shores (LES), the Board of Trustees scheduled an informative meeting on August 8 to discuss storm water and sanitary sewer issues with the Board, Bill Vondra [the Association's Engineer with Land Design, Inc.] and two representatives from the Lake County Department of Utilities [Rick Martin and Randy Rothlisberger].

Bill Vondra was brought on by the Board in 2011. He did not design the LES systems, but was secured as an independent consultant.

#### **Summary**

Multiple surrounding communities experienced flooding in July – not just LES. The cause was too much water in too short of a time period.

The ground could not absorb all of the water and the storm water system could not handle the water volume – nor is it designed to handle that volume of water. Storm water eventually infiltrated the sewer system which was then also overwhelmed beyond its design capacity.

#### **Storm Water System**

Lake County uses a 3-year rain event as the design point for the storm water systems. This corresponds to between 2.2 and 3.0 inches of rain in a 24-hour period and this design point works the vast majority of the time.

The design point is based on historical data, what surrounding counties use and some other factors. Changing the design point and retrofitting the entire Lake County storm water system infrastructure would not be practical. It would also not guarantee that flooding would never occur. No matter how much goes into the infrastructure, Mother Nature can overload it.

Also, retrofitting just LES would not guarantee that flooding would not occur because now the surrounding areas could be the bottlenecks, and Mother Nature

could still overload the infrastructure – no matter what is installed.

The two times that LES has had neighborhood-wide flooding, many other communities within Lake County (and to a greater extent, a large portion of northeast Ohio) have experienced flooding as well. Thus, the phenomenon was not exclusive to LES.

Overall, the LES flooding issues, as well as the flooding issues that occurred throughout the northeast Ohio region were caused by too much rainfall in a given period of time. Chuck Hillier was told by Tim Miller (Director of Lake County Soil and Water) that we received 6 inches of rain in 6 hours. That is a lot of water in short period of time!

There is no single fix to alleviate the potential for flooding in LES, and in this respect, we are no different than most other neighborhoods. As the meeting progressed, it became apparent that there are multiple factors that are interrelated. Thus, a *systems* approach is appropriate because changing one variable will affect the other variables.

#### **Sewer System**

Randy stated that the sanitary system is designed using 400 gal/home/day and a scalar of 2.5 is used for peak usage. He also stated that the system in our area (including LES and the surrounding neighborhoods) is only at about 25% of the design capacity.

Sewer backups are not an everyday problem and the culprit during the flooding was rainwater in the sanitary system. The rainwater may have entered the sewer system in several ways such as:

1. Homeowners opened the sanitary cleanouts in their basements to drain basement water. This may have been done without them knowing the harmful consequences.
2. Basements flooded with rainwater, that then went into the basement drains which connect to the sewer system
3. Manhole covers buried under water – they are not completely sealed

4. Leaks in the lateral connections to the sewer main lines

Bill provided explanations of why several regions within LES had sewer backups. Ultimately the issues were caused by too much rain that fell too fast. Storm water ultimately infiltrated the sewer system and overloaded it. Again, the LES storm water and sewer systems work most of the time, as designed, without issues.

### **Possible Resident Issues**

Several issues were stated during the meeting that affect the neighborhood drainage such as:

- Residents placing things on easements that block drainage: pools, fences, landscaping, etc. Some of these items may not be allowed per the Master Declaration.
- Lots not graded properly
- Covered drains – this could have been unintentionally done by the homeowner or perhaps a landscaper. Drains might be completely covered or even partially covered.
- Drain sizing – Bill provided an example of how both the drain and pipe size in one specific location is smaller than what is listed on the master plan
- Swales – not all of the swales are as laid out in the master design. This may be due to several reasons such as the timing of when homes were built, non-compliance of the builder or non-compliance of the home owner, etc.

### **What Residents Can Control**

Things that you can do now as a homeowner to TRY and minimize basement flooding are as follows:

1. *Install a plumber's test plug (available at hardware stores) in the basement floor drains*
2. *Install a riser at the basement floor drains (a plastic drain pipe extending vertically from the drain). Randy's comments are as follows: "There is no recommended height that a riser should be above the sanitary sewer. Each location is different. For full protection, the lowest outlet should be above the sanitary manhole at the street. If you know how high the water was in your basement during the*

storms of 2006 and 2013 then I would go at least 6 inches above that."

3. *Modify the plumbing line so that water is pumped to an upper level drain, eliminating the drains at the lower level*
4. *Install protective plumbing devices (like backwater valves). Inspect them regularly to ensure they are operating properly. The installation of these protective devices should be left to plumbing professionals. Check with the local building department.*
5. *Ensure service connection pipes between the municipal sewer main and your house are in good condition*
6. *Have downspouts from your gutters direct water at least 5 feet away from the foundation of your home. Downspouts should not be imbedded into the ground or connected to the sewer system or footing drains.*
7. *Ensure your footing drains direct water to the storm sewer or sump pump, away from your foundation. Footing drains should not be connected to the sanitary sewer system.*
8. *Ensure your sump pump is connected to the storm sewer system (not your interior plumbing) or that it empties onto your lawn at least 5 feet from the foundation wall (not the laundry tub or footing drains)*
9. *Slope ground away from your foundation to allow rainwater to flow away from your home*

Items 1-9 were copied directly from the Lake County web site:

<http://www.lakecountyohio.gov/Portals/11/forms/sewer%20back%20up%20website.pdf>

10. Add an appropriately sized secondary pump to aid your primary sump pump to remove storm water. Note that some LES residents that installed secondary pumps that were battery or water powered pumps, still flooded in July because they did not provide enough pumping capacity. The August 2013 newsletter has an article about different pump types and their pumping capacities. But once again, Mother Nature ultimately controls the situation, not us.

## Backflow Valves

Backflow valves were suggested during the 8/8 meeting and the following is feedback from the Lake County Plumbing Inspector Dan Nicolson.

1. Back flow valves on the sewer line are permitted if installed inside the home
2. A Lake County building permit is required
3. They can be installed by a homeowner or a plumber
4. Need to remove a section of the concrete floor and dig down below the footer to access the sewer line. An access panel should then be installed flush with the floor.

Dan made sure to point out that these devices must be maintained regularly if they are to operate as expected. He cited how many people that installed these devices after 2006, had similar sewer backup issues in July because they forgot about these devices after installation and they were stuck open or clogged and did not operate properly.

There are many options for these backflow valves – just do a web search with your favorite search engine.

Bill Vondra recommends the Tide Valve Technologies model TF-1. This valve is maintenance free unlike many others.

Rich Wood [Rich Wood Plumbing, Heating and Cooling, Inc.; 750 South State Street in Painesville, Phone 440-352-7790] stated that he has installed another brand and model in homes that as a flapper valve. The cost would run \$1,200 to \$1,500. There are multiple variables to each installation and Rich would want to come out to the home to be able to provide a more firm number. Rich also suggests replacing the flapper valve every 5 years as proactive maintenance.

Randy stated that backflow valves can be installed outside of the home on the sewer laterals, but they will try to talk you out of it and prefer that they be installed inside the home.

Something to keep in mind for the future is as follows:

- If LES residents start installing backflow valves or riser pipes, and if another flooding event occurs, residents without backflow valves or riser pipes [who may have not had sewer

backup in the past] may now be at a higher risk than before of having sewer backup

- The water has to go somewhere – and if it went into your neighbor's basements before, but now it is blocked from going there, it has to go somewhere else
- Thus, even if you have not experienced sewer backup in the past, you might still seriously consider being proactive to try and minimize any future issues

## Possible Future Neighborhood Solutions

Bill's main recommendation is to create a large basin just south of Pebble Beach Cove & Outrigger. However, this is not on LES property.

Chuck Hillier stated that he had a conversation with Jim Gills [Lake County Engineer] who stated that he would do such a project. However, the following would still be needed: (1) study to determine an appropriate size, (2) garner permission from the current land owners and (3) secure public funding. If replacing a culvert on Lake Road was estimated at \$400-500k, creating that basin would most likely cost even more.

If this particular solution is to move forward, LES would need the support of the residents which would most likely be in the form of phone calls, letters, emails, etc. to County officials. The Board will keep residents posted and will provide information about what residents should do and the appropriate timing.

Another suggested possible solution is to modify the basin on the north side of Outrigger (south of Pebble Beach Cove). Again, a study would need to be completed and funding secured.

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## Storm and Sewer Systems: a Graphical Representation – by Jim Sorenson

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The two images in this article provide a visual representation of the storm and sewer systems.

During the August 8 meeting it was stated that the Lake County Department of Utilities can check your lateral connection to the main sewer line for free.

However, it was also stated that the sewer lateral is the homeowner's responsibility. The sewer main may be located on either side of the street. If you are going

to have your lateral checked by a professional, Rick Martin suggested that you request that they use a 200 ft snake, so that it will make it to the sewer main no matter what side of the street it is located.

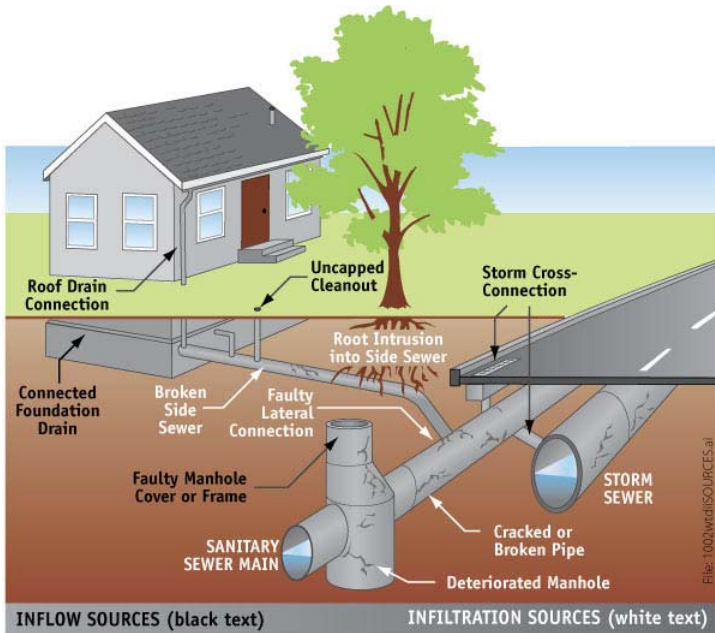


Image from <http://savetherain.us>

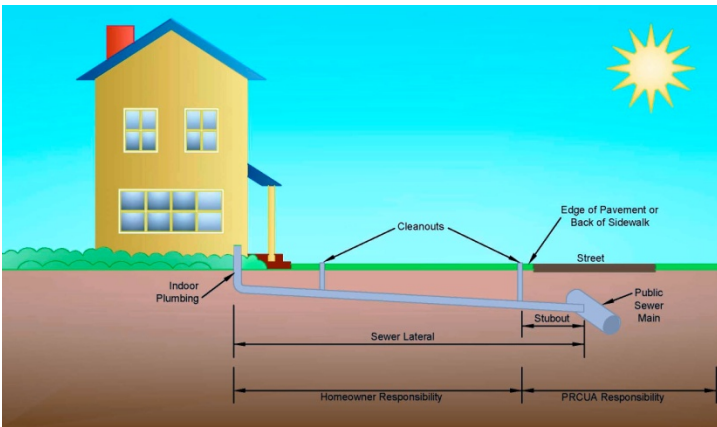


Image from <http://www.prc-ua.org>

### Committee and Event Volunteers Needed

Several volunteers are no longer with us on the various committees & events for our neighborhood and we need your help. You can help as much or as little as you would like with a committee or event such as: Covenants/Restrictions • Financial • Landscaping/Beautification • Recreational (including the subcommittees for events like the Easter Egg Hunt,

4<sup>th</sup> of July Parade, etc.) • Yard Sale Volunteers. The various committees may be reached via the web site:

<http://www.lakeerieshores.com/contactUs.aspx>

### Dates to Remember – copied from the Township newsletter

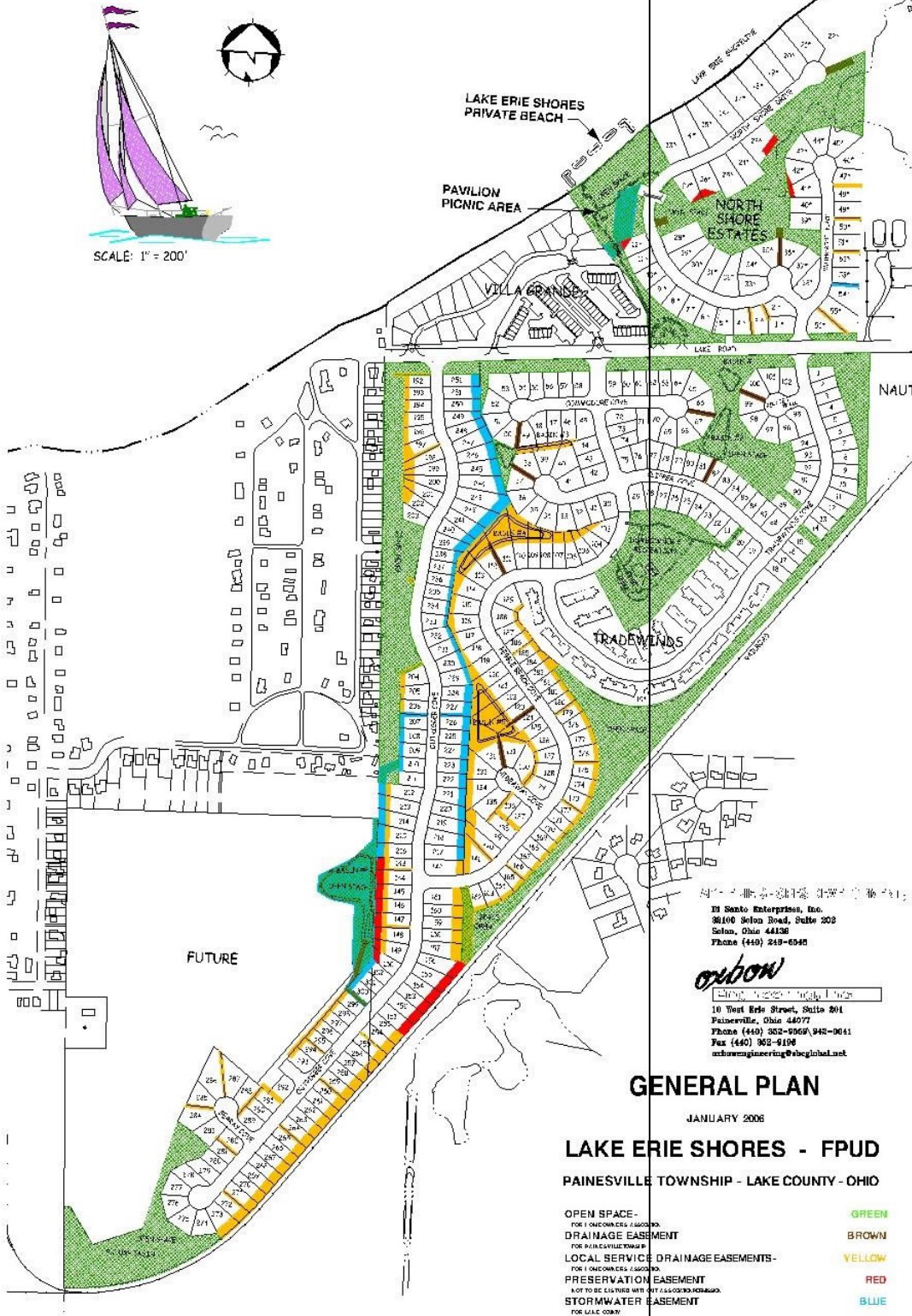
#### Township Yard-Waste Drop-Off

Every Saturday (10:00 am to 2:00 pm) and every Wednesday (7:30 am to 3:00 pm) thereafter (through December 3rd) at the Painesville Township Road Service Garage - 558 Fairport-Nursery Road. This service is for Painesville Township residents ONLY.

Please note that Villa Grande is a private drive and trespassing is prohibited. Please use the parking lot on Lake Road and do not access the beach park through Villa Grande.

Easements

August 8 meeting discussion was how homeowners have put things onto the various easements that (1) negatively affect the neighborhood's drainage (pools, fences, landscaping features, etc.) and (2) may not be allowed per the LES Master Declaration.



September 28 - Household Hazardous Waste Collection

From 9:00 am to 3:00 pm at the Lake County Fairgrounds (no fee). Acceptable Items: Household Cleaners and Solvents [Thinners, Kerosene, Turpentine, Lighter Fluid, Strippers], Automotive Fluids [Used Motor Oil, Gasoline, Coolants, Antifreeze, Grease], Oil-based Paints, Varnish, Shellacs, Stains, Aerosols, Polyurethanes, Primers, Grout, Pool Chemicals, Lawn & Garden Chemicals, Pesticides, Weed Killers, Spray Insecticides, Batteries [all sizes including lead, acid & household], Fluorescent Bulbs, Photography, "Hobby" Chemicals, Mercury, Empty Propane Tanks, Roofing Tars, Drive Sealers.



No Water Based Paints, Radioactive (Smoke Alarms), Ammunition, Explosives, or Medical Waste.

Call (440) 350-2582 or (440) 350-2644 for more information.

The following image is a 2007 plot of the neighborhood easements for reference. Part of the

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GENERAL PLAN

JANUARY 2006

LAKE ERIE SHORES - FPUD  
PAINESVILLE TOWNSHIP - LAKE COUNTY - OHIO

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**Contact Information**

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Lake Erie Shores Web Site  
[www.LakeErieShores.com](http://www.LakeErieShores.com)

**Home Owners Association Committees**

Welcoming Committee ([welcome@lakeeriesthores.net](mailto:welcome@lakeeriesthores.net))  
Covenants/Restrictions Committee Chair – Bruce Buffie  
([buffie723@att.net](mailto:buffie723@att.net))  
Financial Committee Chair - Randy Van Buren  
([rcvanburen@sbcglobal.net](mailto:rcvanburen@sbcglobal.net))  
Landscaping & Beautification Committee - Dave Spall  
([davidspall@sbcglobal.net](mailto:davidspall@sbcglobal.net))  
Recreation Committee Co-Chairs - Jonathon Adkins  
([jonsuzannaadkins@sbcglobal.net](mailto:jonsuzannaadkins@sbcglobal.net)) and Cory Wertch  
Volunteer Coordinator - Paula Haumesser  
([paulahaumesser@sbcglobal.net](mailto:paulahaumesser@sbcglobal.net))  
Newsletter Committee Chair – Jim Sorenson  
([newsletter@lakeeriesthores.net](mailto:newsletter@lakeeriesthores.net))

**Board of Trustees**

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