



Sewerage/Septic/Drainage Systems in the Philippines

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Most Philippine cities have drainage systems of some kind. There are no separate storm water and waste water (sewerage) systems. Wastewater from septic systems freely mixes with the stormwater. In practice this is not as bad as it sounds as the volume of storm water is large and may well flush out the drainage system and its contents into the streams and rivers. The installation and maintenance of drainage systems (along with roads and water systems), is a one of the major responsibility of local government.



This is a new sewer/drainage system in Villa, Iloilo City. It drains directly into the Batiano River. From a public health perspective, this is progress. It gets septage and storm water out of neighborhoods and into the river.

The systems are not necessarily centralized. The idea is to get wastewater to a nearby ditch, stream or river. Most residences will have a septic tank or cesspool to treat toilet waste. This can provide some very basic level of treatment of human waste. The output of septic system (septage) is piped to the subdivision or barangay drainage system. For a description of how we built our Philippine septic system **[CLICK HERE](#)**.

Greywater (wastewater from sinks, showers and washing) is generally discharged untreated into the drainage system. Sometimes the drainage system is more or less underground and sometimes it is open concrete ditches. This can be smelly but cheaper and easier to keep clear than covered drainage systems. In many places the drainage system is under the sidewalks, the sidewalks consisting of concrete slabs covering the drainage channel. Sometimes these are broken, so walk carefully or plunge a few feet into the malodorous mess. There is no further treatment of the waste before it plunges into the nearest stream.



MISSING SLABS SHOW A
TYPICAL "SIDEWALK OVER
SEWER" PHILIPPINE MUNICIPAL
SEWER SYSTEM IN TIGBAUAN,
ILOILO

In squatter areas the the above scenario breaks down and there can be more obvious, surface pollution.

Iloilo has some big rivers with strong tidal flows so all that goes into the rivers seems to get promptly flushed away. My impression is that the situation is better here than in Cebu City where the streams used for drainage were really disgusting.



BINONDO, MANILA

When you look at property, ask about and confirm the easy availability of a good drainage system. We have looked at property in Iloilo City which seemed so nice but actually had no access to a drainage system. Further, access to the nearest drainage would involve going through other properties. This may or may not be easy. Do NOT expect anyone to inform you of such problems when you look at property.

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Tish

Good day! I just have a question, we are about to write a capstone design project about designing of sewage system/facilities and we would love to know the different provinces/cities that has no sewage system, so we could use those as location for our project. A lot of articles shows percentages, but almost none mentioned a specific location. If you could help us we would be forever grateful! Thanks 😊 Have a good day! More power.

PS: I love the article, it speaks volumes on the amount of innovation our country needs to make for its citizens. The only way to move is forward, with enough help from private and public sectors, we could reach anything.


[Reply](#)



Bob and Carol

Most places in the Philippines rely on private septic systems for “treatment”. Septage can be handled by municipal drainage systems which direct septage and storm water to the nearest stream or river. I really don’t know of a place having a significant population but no drainage system. Perhaps other readers can help.


[Reply](#)



dale

we had our house built in baybay leyte philippines while we was still working in the states. now I have a septic tank under the floor in one of my bedrooms.is this legal in the philippines


[Reply](#)



Bob and Carol

Dale, there was a shopping mall in Manila which had a huge explosion from a septic system. Who knows what the law is. Nobody seems to care. I used to live in New Hampshire when they had the Live Free or Die license plate motto, but the Philippines is the real libertarian’s paradise!


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Peter Holloway

Another Philippine plumbing horror is the lack of a direct connection between the toilet fixture and the sewer line – they just seal the toilet to the floor and block the fixing holes – they cannot layout anything
Work ethic, skill levels and pride in work and any qualified supervision/ direction are totally lacking in the Philippines

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Bob and Carol

Peter, thanks for your comments, but we disagree. Our workers certainly would have benefitted from building trades training, but they worked very hard and were generally skilled at what they did, and were intelligent, creative and very willing to learn. I have worked construction in the U.S. and most foremen there would be happy to have the Filipino workers we had. Yes, they would require some direction, but once they knew what was expected they would be great workers. Yes, the mounting of toilets is different. I bought mounting flanges and wax rings, so we have the flanges and the mounting bolts but the toilets were still set into cement grout, the Filipino way. I don’t see any problem. Just a different approach. Bob and Carol

[Reply](#)



Regina Ragan

Hi. I found your step by step written summaries of your experiences fascinating, coming from an American's point of view.!

Actually I was surfing the net to find out about Philippine legislation for installing grease traps in high rise condos.

I just bought a newly finished studio condo on the 27th floor of an SMDC project and I have this huge industrial looking grease trap in the cabinet under the kitchen sink! After reading one of your blogs, I am now aware of the "cold water" thing (no hot water for anywhere else except for a tankless water heater to be installed on the wall above the shower) . I had been thinking of installing one at the kitchen sink, but whoa! What is this? Does it come with a lid? I don't like this open, standing water, stainless steel, shoe box, with a stainless steel screen, and big orang pipe sticking out of it, ready and waiting for its cockroach tenants!

So I was surfing the net to find out about Philippine plumbing and waste water legislation and I came across your Philippine life. Very interesting! Haven't yet found out if this grease trap thing is necessary. It's huge! It looks like it's for a commercial restaurant! I know now that these might be necessary since most homes in the Philippines only vuse cold water, but based on my little 24 square meter condo, the grease trap seems excessively big. If I ever rented it out to three people (the maximum apparently, to be bed sitters or spacers, which I also think is way too tight), but the amount of grease generated.... well, not sure.

Keep writing! I'll keep looking. Thanks

Reply.



Bob and Carol

Regina,

Interesting. I don't know why the trap does not have a cover. I suppose its being open encourages cleaning out, whereas if it was sealed, maybe it would never get cleaned out. Anyway, you must have a great view!

Bob

Reply.



John

It's nice reading your site and the projects you've done already. I felt I needed to take time to point out that although your article on Sewerage (Sewage)/Septic/Drainage Systems in the Philippines explains much for the readers here, you're missing the fact that most homes and other buildings use a underground tank called a septic tank that is. I couldn't imagine living here in Davao and seeing human waste going to the river as it would visually seem based on your writings here so I wanted to help you explain to others a bit more about the basic system used in the Philippines because this is not really the image one should partake in.

Most homes, even the small gamay bamboo homes will even dig a large hole in the ground to run a toilet drain pipe to, typically 4" in diameter from even a make shift CR (comfort room) bathroom sort to speak as it may also house their shower and other sinks leading to this tank including a kitchen sink. So most buildings and homes use a tank (septic) underground and they all have a pipe at the top as an exit or what I call an overflow. so the tank catches most of the human wastes and the so called gray water is what goes out to the side of the road as you described here and eventually to a river and then worst of all the ocean. Not in all cases will you see all drains going to the septic tank but should. I have seen the sadness of cheap houses built over water and or on water in squatter area's even here and without having a septic tank or even a CR/bathroom and I hope the officials here do something about this.

You're right as to say there's no sewage treatment facilities in the Philippines or at least not in the big cities. This is the reason the oceans are getting so polluted to the point that you should not use the oceans here to swim in . I have seen black sand beaches and most of these are this way because the coral reef is dead now due to the pollution. This all comes from what comes down the rivers which is what comes down the sides of all the roads in ditches or their local storm drain system but from all the buildings and homes here and it is from that overflow pipe coming out of most septic tanks here. Waste water that is without the human solid waste is bad enough to deal with so at least the septic tank can be pumped out once a year or so but here is part of the solution you should of mentioned. As known in the USA and other parts of the world, a drain field also known as a leach field or leaching in other terms such as this link will education others with;

http://en.wikipedia.org/wiki/Septic_drain_field and these are so easy to add to an existing septic tank by adding a "TEE" in that overflow pipe first allowing the waste water to overflow into this drain field absorbing into the soil. You won't find an overflow in other country's but due to heavy seasonal rains here, it may not always seep into the gravel around the perforated pipe and soil but in most cases this will ease the amount of human waste water going and or ending up in our oceans. A baffle or deflector must be used in the septic tank to prevent the human solid waste from going out the overflow, some use a distribution box too with a valve to dispersed to two different sections of a leach field. Also called an absorption field. Perk test can be done too to help determine the amount of moisture/water already in the soil to help determine the best site or high ground for it's installation.

See this images of other leach fields; **http://www.google.com/search?q=leach+field&hl=en&rls=com.microsoft:en-us:IE-Address&rlz=117NDKB_enPH511&tbm=isch&tbo=u&source=univ&sa=X&ei=NakyUayHG8aLrQellYGYDw&ved=0CDoQsAQ&biw=1448&bih** so you'll get the general idea of it's great use. If the Barangay want to keep their little city's cleaner, they can start catching this overflow human waste water using something like a Leachate; **<http://en.wikipedia.org/wiki/Leachate>** but read the cautions effecting the environment not matter what is used as long as we protect the fish, our future food supply in our oceans.

For the best information on how to reduce all solid waste see the Department of Ecology, State of Washington, USA at this link;

<http://www.ecy.wa.gov/programs/swfa/index.html> Thanks for posting my information by the way. I am concerned for our children's future. John Browning, Davao

Reply.



GOlloilo

John,

Thanks for your excellent comments and the links to additional resources. From your comments I could see that my post was not very well written so I have made some changes to make it clearer that most houses do have septic systems and don't discharge untreated toilet wastes. I also included a link to the part of our house building posts which cover the building of our own septic system:
<http://myphilippinelife.com/our-philippine-house-project-septic-and-drainage/>

I hope the changes are for the better and thanks again for your thoughts.

Bob

Reply.



paul Buchanan

hello Bob and Carol.i have read your building of a house ,it is good!.
thank you for sharing.
my eyes are set on leyte.Biliran Biliran.
It is good to see a job being done properley.
cheers .
paul

Reply.

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