

Radnor Township's Storm Water and Wastewater Systems

*Protecting Public Health and the
Environment*

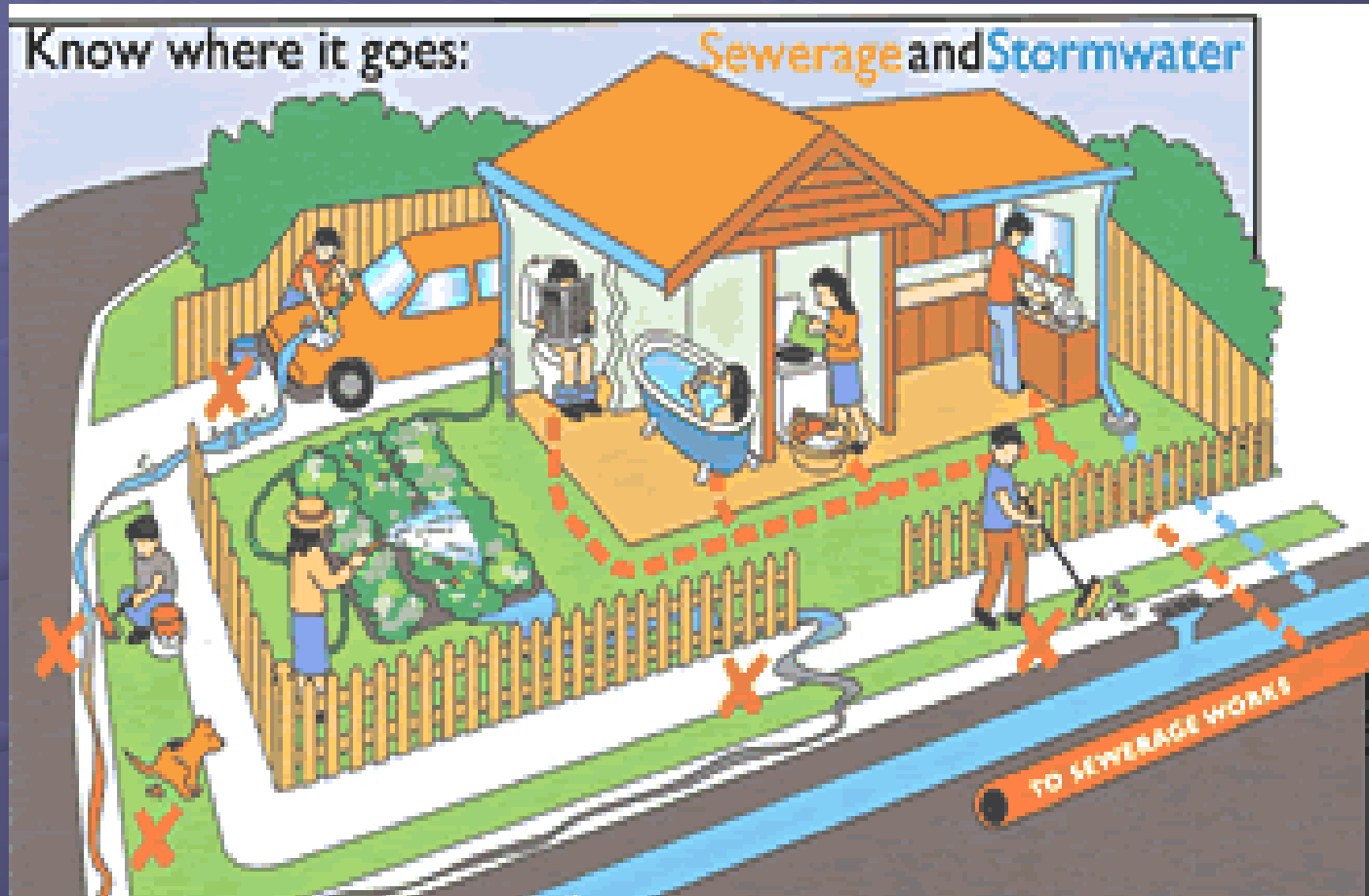
What is Wastewater.

- The spent water from residences and institutions, carrying body wastes, washing water, food preparation wastes, laundry wastes, and other waste products of normal living, are classed as domestic or sanitary sewage.

What is Stormwater ?

- Stormwater is water which, after rainfall, drains off the land, surfaces of our roads, roofs, buildings and driveways into drains.
- Storm water is the #1 pollutant of our rivers and streams.

Storm Water versus Wastewater



Stormwater run-off contains the following pollutants.

- Oil.
- Grease
- Dirt.
- Fertilizers
- Chemicals
- Leaves
- Cigarette butts
- Animal waste
- Litter .
- Anti-freeze
- Paint
- Cooking grease
- Gravel

Lets take a tour

- Radnor Township's storm water and waste water systems Google Earth.

Stress on our infrastructure.

- Radnor township has 126 miles of sewer pipes
- Our waste water leaves Radnor Township and enters the Radnor Haverford Marple sewer authority (RHM)
- It is then treated in the DELCORA system at The South East Waste Water Pollution Control System.

- Our average monthly flow is approximately 100,000,000 (one hundred million) gallons of waste water.
- *To put this in perspective*
- Here is an average Tanker Truck



● If our waste water was transported out of town by Tanker Truck every month, how many trucks would it take?

● 100 trucks ?

● 200 trucks ??

● How about 11,000 trucks.



- Placed end to end the trucks would stretch from Philadelphia to Washington D.C.



Annual Usage Per Person

- Based on our population of approximately 30,000 people and our input of 100,000,000 gallons per month.
- Each person in the township contributes 151 tonnes of waste water annually.

Current Problems

- Inflow: Inflow is water that enters the sanitary sewer system through improper connections, such as downspouts and groundwater sump pumps.
- Infiltration: Infiltration is groundwater that enters the sanitary sewer system through leaks in the pipe.

Current Data

- Radnor Township is charged per gallon for the amount waste water we put into the system.
- Last year our cost was \$3,482,000
- The more we put in, the more we are charged .

How do we contribute less?

- “Secure the Sewer”
- The only water entering the sewer system should be waste water. Not storm water, not ground water , not streams or rivers.
- However due to our aging (100 years old) sewer infrastructure and deterioration of its components , unwanted clean water is infiltrating and costing us money.

How do we know this.

- RHM has informed us that after periods of heavy rain ,our flow into the system increases 30% (that's about 3,000 additional tanker trucks per month)
- Rain and groundwater infiltrates via broken and cracked pipes.

If clean water can get in !!

- Sewage can get out.
- Cracks and breaks not only let water in. They also let sewage seep into our groundwater and streams.
- Not only does a deteriorating infrastructure cost us money.
- It is also an environmental and health hazard.

Out of sight out of mind

- People only become concerned about our underground storm and sewer infrastructure when it fails.



Solutions

- Repair of existing pipes
- Reduce stormwater run off.
- Public education.