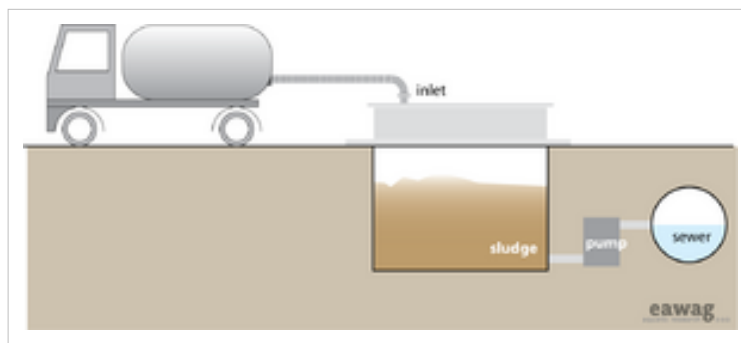


Sewer_Discharge_Station

Application level		Management level	
Household		Household	
Neighbourhood	XX	Shared	
City	XX	Public	XX



Applicable to systems:	Languages / langues / idiomas		
1, 5, 6			

Inputs: Faecal Sludge

Outputs: Faecal Sludge

A Sewer Discharge Station (SDS) is a point along the sewermain that can be legally accessed and used for discharging septage and sludge directly into the sewer so that it can be transported to a (Semi-) Centralized Treatment facility. SDSs are intermediate transfer points for sludge that cannot easily be transported to a dedicated treatment facility. Sludge can be dumped in a local SDS rather than either a) dumping it illegally or b) trying to travel to a distant collection point.



Sludge is dumped into the SDS and then either released directly to the sewer or held in a temporary storage tank before being released to the sewer at a set time. Timed release can help prevent solids from building up in the sewer line and also help optimize the treatment efficiency of the treatment technology by reducing peak loading.

A SDS consists of a parking place or discharge dock for the vacuum truck or sludge cart and a connection point for the discharge hose. The SDS may also have a storage tank and pumping system. The dumping point should be built low enough to minimize spills when labourers are manually emptying their sludge carts. Additionally, SDS should include a vent, a trash screen to remove large debris (garbage) and a washing facility for vehicles. The station should be well protected and maintained to prevent random dumping into the sewer and to ensure the safety of the users.

A variation is a stand-alone Transfer Station that is not connected to a sewer main (for more information, refer to: Transfer Station (Underground Holding Tank)). When the Transfer Station is full, a vacuum truck must empty the stored contents and take the sludge to a suitable treatment facility. If the municipality or sewerage authority is operating the Transfer Station they may charge for permits to dump in the Transfer Station to offset the cost of maintaining the facility.

Advantages	Disadvantages/limitations
<ul style="list-style-type: none"> - Reduces transport distance and may encourage more community-level emptying solutions. - May reduce illegal dumping of faecal sludge. - Moderate capital and operating costs; can be offset with access permits. - Potential for local job creation and income generation. 	<ul style="list-style-type: none"> - Requires expert design and construction supervision. - May cause blockages and disrupt sewer flow. - Sludge requires secondary treatment and/or appropriate discharge.

Adequacy

SDSs are especially appropriate for dense, urban areas where there is no alternative discharge point (e.g. faecal sludge thickening pond) and where there is a sewer main. Multiple SDSs in a city may help to reduce the incidence of illegal sewage dumping. The quality and quantity of the faecal sludge will significantly affect the treatment technology that is receiving the sludge.

SDSs are adequate when there are many locations where sludge is manually removed from pit latrines. The construction of an SDS may also stimulate the independent- emptying market. The site for the SDS should be easily accessible, conveniently located, and easy to use. If there is an underground holding tank for timed releases of sludge, it must be well constructed to prevent leaching and/or surface water infiltration. Depending on the maintenance of the facility, odours can be unappealing to local residents. However, the benefits gained compared to open-air dumping would likely offset the odour nuisance.

The system for issuing permits or charging access fees must be carefully designed so that those who most need the service are not excluded because of high costs, while still generating enough income to be sustainable and well-maintained.

Health Aspects/Acceptance

SDSs have the potential to significantly increase the health of a community by providing an inexpensive, local solution to faecal sludge and septage disposal. Many informal settlements are located near to, if not directly on top of, a sewer line. By building a legitimate access point, the risk of sewer damage and illegal access points may be reduced. When pits are emptied regularly and illegal dumping is minimized, the overall health of a community can be improved significantly. The location must be carefully chosen to maximize efficiency, while minimizing odours and disturbances to nearby residents.

Upgrading

SDSs are relatively common in North America, especially in rural communities where septic tanks are common. There, they are equipped with digital data recording devices to track quantities, input types and origin, as well as collect data from the individuals who dump there. In this way, the facilitators can collect detailed information and more accurately plan and adapt to the changing loads. Maintenance

Racks (screens) must be cleaned frequently to ensure a constant flow and prevent backups. Sand and grit must also be periodically removed from the holding tank. The pad and loading area should be cleaned regularly to prevent smells, flies and other vectors from becoming a nuisance.

Acknowledgements

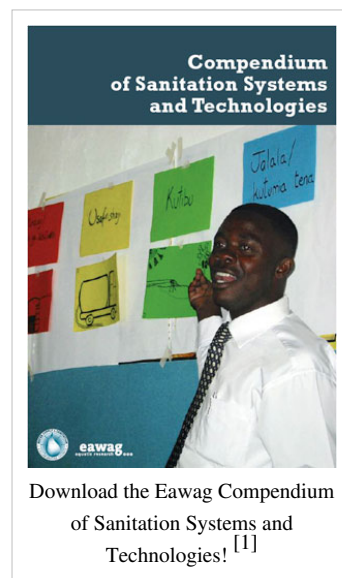
The material on this page was adapted from: Tilley, E. et al. (2008). Compendium of Sanitation Systems and Technologies ^[2], published by Sandec ^[3], the Department of Water and Sanitation in Developing Countries of Eawag ^[4], the Swiss Federal Institute of Aquatic Science and Technology, Dübendorf, Switzerland. The publication is available in English, French, and will be made available in Spanish. Available in the IRC Digital Library ^[5]

References and external links

- African Development Fund (2005). Accra sewerage improvement project-appraisal report. Infrastructure Department Central and West Regions. Available: <http://www.afdb.org>
- Boot, NLD. and Scott, RD. (2008). Faecal Sludge in Accra, Ghana: problems of urban provision. Proceedings: Sanitation Challenge: New Sanitation Concepts and Models of Governance. Wageningen, The Netherlands.
- USEPA (1994). Guide to Septage Treatment and Disposal: EPA/625/R-94/002. United States Environmental Protection Agency, Office of Research and Development, Cincinnati, Ohio, USA. Available: <http://www.epa.gov>

References

- [1] http://www.eawag.ch/organisation/abteilungen/sandec/publikationen/compendium_e/index_EN
[2] http://www.eawag.ch/organisation/abteilungen/sandec/publikationen/publications_sesp/downloads_sesp/compendium_high.pdf
[3] http://www.eawag.ch/organisation/abteilungen/sandec/index_EN
[4] http://www.eawag.ch/index_EN
[5] <http://www.irc.nl/docsearch/title/163208>



Article Sources and Contributors

Sewer_Discharge_Station *Source:* http://www.akvo.org/wiki/index.php?title=Sewer_Discharge_Station *Contributors:* Marktielewestra, Niharika

Image Sources, Licenses and Contributors

Image:Sewer_discharge_station.png *Source:* http://www.akvo.org/wiki/index.php?title=File:Sewer_discharge_station.png *License:* unknown *Contributors:* Marktielewestra

Image:english_flag.gif *Source:* http://www.akvo.org/wiki/index.php?title=File:English_flag.gif *License:* unknown *Contributors:* Marktielewestra

Image:french_flag.gif *Source:* http://www.akvo.org/wiki/index.php?title=File:French_flag.gif *License:* unknown *Contributors:* Marktielewestra

Image:spanish_flag.gif *Source:* http://www.akvo.org/wiki/index.php?title=File:Spanish_flag.gif *License:* unknown *Contributors:* Marktielewestra

Image:Icon_sewer_discharge_station.png *Source:* http://www.akvo.org/wiki/index.php?title=File:Icon_sewer_discharge_station.png *License:* unknown *Contributors:* Marktielewestra

Image:compendium.jpg *Source:* <http://www.akvo.org/wiki/index.php?title=File:Compendium.jpg> *License:* unknown *Contributors:* Marktielewestra